CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

ANATOMY AND PHYSIOLOGY.

STRUCTURE OF ARTICULAR CARTILAGE.

Dr. Joseph Leidy has published, in the *American Journal of the Medical Sciences* for April 1849, the results of his researches into the Intimate Structure and History of the Articular Cartilage. As his observations appear to possess considerable merit and some points of novelty, we will lay them before our readers with but little abridgment.

Adult Articular Cartilages are closely moulded upon the extremities of the bones; and, when removed by maceration in dilute acid, present a rough surface corresponding to that of the bone. Their free surface is smooth and glistening, exactly fits the surface of the opposed cartilage, and is bathed with synovia. They vary in thickness in different joints, and in different parts of the same joint. When broken, which requires some force, they present a fracture always perpendicular to the surface, and in some cases laminated. They are destitute of vessels, lymphatics, and nerves. The vessels near the edge form loops, and those which approach the surface are separated by a thin lamella of bone (Toynbee.) The intimate structure presents organic cells, or cartilage-cells or corpuscles, and an intercellular substance or matrix.

Cartilage Corpuscles. These are solid nucleolo-nucleated cells, rarely isolated, but most usually in groups of two up to twenty-two, arranged in single, double, triple, or quadruple rows, perpendicular next the surface of attachment, more or less oblique in the centre, and finally becoming parallel with the free surface, when approaching it. The groups increase in number from the attached to the free surface; and, in the latter situation, single or isolated cells are more common than elsewhere, while the deeper groups contain the greatest number of individual cells. The cells are rounded when single, or at the extremities of a group; but their surfaces in contact are flattened. The deeper cells average in size 1-2000th of an inch in length, by 1-2270th in breadth; the superficial ones are more flattened parallel with the axis of the cartilage, and are about 1-900th of an inch long; their edges, which appear very narrow, being on an average 1-2270th of an inch in thickness. The cell-wall appears blended or fused with the intercellular substance, and can be distinguished only in the very early condition of the cell. The cell-contents usually consist of a translucent, homogeneous, or at most an indistinctly and very minutely granular substance, with a more or less central mass of distinctly coarser and darker granular matter. This mass contains a transparent round or oval nucleus, which is brought into view and coloured brown by the application of tincture of iodine; it also frequently contains fat-granules or globules. In the superficial cells it averages the 1-2900th of an inch, in the deeper, 1-3448th of an inch in diameter. It is generally wanting in the more superficial layer of cells, which are filled with finely granular contents, much resembling fat granules. In these superficial cells, the nucleus is large, round, or elliptical, very finely granular, and contains a transparent nucleolus. In some of the last-named cells, Dr. Leidy has observed an arrangement of the granular matter in a circular form, at a short distance from the nucleus, giving the latter an appearance of being contained within a larger nuclear body. This appearance can in general be but faintly seen. In other cases, the superficial cells are more similar to the deeper cells, except that they are more flattened, and the internal granular mass is larger.

Not unfrequently, the most superficial layer of the cartilage presents large flattened cells or cell-groups, as if rubbed out by attrition; and less frequently, Dr. Leidy has observed beneath the free surface, and too deep to be influenced by friction, large and flattened cells, usually isolated or in pairs, finely and indistinctly granular, without apparent nucleus, or with the apparent formation of a nucleus from aggregation of the finer granules around a large transparent nucleolus. Are these cells in the process of development?

Cartilage Matrix is most abundant in the deeper part, and is in thin sections translucent, but less so than the cell-contents, and usually has a faint yellowish hue. It has generally been described as a homogeneous, hyaline, or finely granular substance; but Dr. Leidy is fully convinced, from numerous and carefully repeated observations, that it has a filamentous structure. The filaments are exceedingly fine, but possess considerable strength, and are pretty uniform in size, having an average measurement of the 1-25000th of an inch in diameter. When viewed with light thrown on them with considerable obliquity, they appear finely granular, each consisting of a row of granules. Acetic acid produces no apparent influence on them; potassa renders them more translucent and faint, and iodine stains them yellow. These filaments lie parallel, and adhere very tenaciously, so that they are very difficult to be demonstrated, though they may be occasionally seen at the ends of a torn shred of cartilage. But if a fine shred be torn off from the articular cartilage of a bone which has been macerated in dilute hydrochloric acid, and examined with a one-fourth or a one-twelfth object-glass, numerous detached and exceedingly delicate spider-thread-like filaments will be detected along the whole length of the edge of the shred. In tearing off fine shreds, a group of cells will be frequently found torn through; and besides this, straight fibres are frequently torn loose in the part of the cartilage where the matrix is most abundant, without coming into contact with cell groups; hence the fracture of articular cartilage in a definite direction seems to depend, not on the arrangement of the cell groups, but entirely on the filamentary arrangement of the matrix. The membranous layer, by which the fragments of articular cartilage adhere at the free surface when broken through, was formerly believed to be the synovial membrane. Modern anatomists believe its membraniform condition to depend on the arrangement of its cell groups parallel to the surface, but Dr. Leidy finds this to result from the structure of its matrix, which has a filamentary arrangement, the filaments running at right angles to those of the deeper cartilage, and parallel to the surface. The filaments are arranged vertically in the deeper part, but parallel to the surface in the superficial stratum; and this seems to determine the direction of the cells.

Synovial Membrane. Dr. Leidy has always failed to detect this, in the adult, on the free surface of the articular cartilage, or even the appearance of a basement membrane. It appears to terminate at the circumference of the cartilage, a very little beyond the vascular circle. In the fœtal state, it distinctly exists; and may be readily detected by its flattened epithelial nucleated cells, beneath which is a transparent homogeneous basement membrane. But after birth, in the progress of growth of the articular cartilages, it appears to be destroyed by pressure and attrition, probably also by the retiring of the vessels of the surface towards the circumference. It appears to be progressively removed from the centre towards the circumference, but always to remain a little in advance of the vascular circle.

Occasional Peculiarities have been met with by Dr. Leidy, in the form of minute lacunæ, from 1-1200th to 1-3125th of an inch in length, by 1-6250th of an inch in breadth. They are lenticular in outline, and most numerous at the deeper part of the cartilage. He has also sometimes seen fibres or columns of bone, penetrating the structure of the cartilage, near the surface of attachment. These are not derived from the bone itself, for they are invariably arranged parallel to the surface. They are quite uniform in shape and structure, being compressed, cylindrical, in transverse section presenting an ellip-

tical figure, the long diameter of which is placed parallel to the surface of the cartilage, or at right angles to the filaments of the matrix in which they are formed. They are not numerous, and vary from a size not exceeding a group of five cells to the size of four or five such groups. They are concentrically laminated; and also possess a radiated conformation, resembling somewhat the structure of an Haversian ossicle, but presenting neither the canal nor the Purkinjean corpuscles.

Development and Growth of Articular Cartilages. The articular cartilages, as a distinct structure, are not perceptible so long as the epiphyses and articular extremities of the bones are not ossified; consequently they do not exist during fœtal life, nor for a considerable period after birth. At birth, if an epiphysal extremity of a long bone be cut vertically through, it will be observed that the cartilage of the epiphyses extends to the synovial membrane, and that there is not the slightest trace of a line of demarcation between the two varieties of cartilage. If the section be more carefully examined, a number of branching canals will be observed ramifying through the cartilage, many of which approach its articular surface, but are in all cases separated from it by a thin lamina of the cartilage, containing no canals. This thin lamina is the first appearance of the articular cartilage, but presents no distinction of structure at this period from the mass of cartilage of the epiphysis. The canals of the epiphysal cartilage contain blood-vessels, which, according to Mr. Toynbee, have a very peculiar disposition, consisting of arteries terminating in dilatations, or in convoluted branches, from which the veins arise. In the process of ossification and increase in size of the epiphysal cartilage, the developing articular cartilage appears to be pushed before it. This is the result of an interstitial growth, depending upon the division of the primary cartilage-cells, the probable development of others, and the increase of the matrix or intercellular substance. When the articular surface cartilage of a cartilaginous epiphysis is examined microscopically, it is found to have all the characters of the latter; and, at an early period of fœtal life, consists of a translucent, hyaline substance, in which are diffused, with considerable uniformity, rounded or elliptical, isolated, nucleolo-nucleated cells, separated from one another by interspaces less than their own diameter. The vary to a moderate degree in size, and average about the 1-1785th of an inch in diameter. The cell-contents form a mass rather darker than the intercellular matrix, the reverse of what is the case in the perfected articular cartilage. They are finely granular, with an intermixture of coarser and more defined granules, some of which appear to be oleic in character. The nucleus is round or oval, varies a little in diameter, averaging about the 1-3570th of an inch, and is very finely granular in structure. Sometimes there are two nuclei, sometimes separated and distant, sometimes in contact, flattened upon the opposed sides, and apparently having originated from the division of a single nucleus. The nucleus contains a more consistent, translucent nucleolus, readily brought into view by the tincture of iodine, and measuring about the 1-11111th of an inch. The intercellular substance is comparatively soft, very translucent, and homogeneous. As the articular cartilage advances in its development, the intercellular matrix increases in quantity, separating the cells to greater distances apart, and acquires a firmer consistence. It becomes faintly granular; and this appearance after a time becomes more decided, though indistinct at any time without a good defining power. Finally, the peculiar filamentous arrangement appears, described in a previous part of this memoir. But the question arises, how does this intercellular substance increase in quantity? Is it a direct deposit of imbibed matter from the liquor sanguinis in the vicinity of the cartilage, or is it produced through the agency of the cartilage-corpuscles, or organic cells of the tissue? Recollecting that the liquor sanguinis does not contain dissolved cartilage, we cannot suppose it to be a direct deposit; but may not the cartilaginous molecules already produced, convert an assimilable substance into molecules of a similar

character, chemical and physical? The latter opinion is probable; but it is easier to suppose it to be formed from imbibed albumen, through the agency of the cartilage cells, in the same manner that it originally results from the albumen ovi, probably through the agency of cells,—the earliest cartilage cells, which have been the offspring, retaining part of the organizing force of the Purkinjean vesicle. As it is certain, that cartilage tissue is produced from albumen, it is worthy of inquiry, whether the organic cells of the cartilage are capable of fixing a material thus transformed in their vicinity. If it can be demonstrated that such a power exists in organic cells in any part of the organic kingdom, we may feel assured that it prevails throughout. Turning back, then, in vitality's great book, to the first few pages, we discover some very simple expositors of the question at issue. Thus, if we examine several of the families of Chlorospermeæ, the oscillatoriæ, ulvaceæ, nostochineæ, etc., we find numerous zooid plants, some of the simplest forms in the organic kingdom, consisting of single rows of organic cells, enveloped in a mucoid substance, and swimming in water or flourishing in humid situations. When the green spores, (single organic cells filled with endochrome and containing a nucleus,) are discharged from a parent cell, they accumulate and fix around themselves a mass of mucoid substance from the nutritive matter floating in the element around them. The spore develops a perfect plant, a mere filament or row, or a lamina of cells, which continues to accumulate mucoid matter around it, until the latter is frequently several times the diameter of the plant itself. Retaining its organic activity, it produces spores, which are to be discharged, and undergo the same progressive changes. Perceiving, then, that these cells can collect and fix matter around them, and continue to operate upon imbibed nutritive fluid, it is rendered probable that an analogous process may be carried on in the denser cartilage, since the latter, as is well known, is capable of imbibing nutritive fluid. Whether the surrounding matter is formed within the cells and then exosmosed, or whether the cell-life extends its formative power beyond the precincts of the cell-wall, remains a question, but both are probable. The cartilage cells, at the early period of development, are easily detached from the matrix, but at a later period the cell-wall fuses or blends itself with the intercellular substance; but even after this, the granular cell-contents are easily detached in a single mass, appearing to be retained together by a delicate protoplasmatic envelope, corresponding to the primordial utricle of vegetable cells. Of the existence of such a structure in some animal cells, Dr. Leidy has satisfied himself by observation. After the cartilage matrix has taken on itself the granulo-filamentous structure, the cartilage-cells increase in number by division, and probably also by the origination of new cells. In studying the development of the groups of cells of the perfected articular cartilage, the steps of progress, as noticed at several periods during the growth of the latter, appear to be as follows:—The simple isolated cartilage-cells are found to become somewhat elongated, then at the sides to present the appearance of an indentation. The nucleus has a central position; and then a faint dividing line, more translucent than the other parts of the cell, is observed crossing the short diameter of the cell, resembling somewhat the transverse line of dehiscence of an ovisac. By varying the focus of the microscope, it is found that this line penetrates as a plane through the cell. The next change which is remarked, is the retiring of the granular cell-contents from the inner parietes of the cell-wall, excepting where in contact with the dividing line of the cell. The cell-wall has now become blended with the intercellular substance, and the latter also occupies a position between the inner surface of the cell-wall, with which it also blends, and the retiring cell-contents. The cell-contents at this period are distinctly divided into two masses, corresponding to the previously mentioned line passing through the cell; and each mass contracts itself, with the contained half of the original nucleus, towards the centre of its

respective cell. From the uniformity with which the granular cell-contents contract, holding all contained parts together, granules, nucleus, and fat globules, Dr. Leidy is strongly impressed with the idea, that they have a protoplasmatic envelope or primordial utricle. In vegetable cells, we frequently observe the same mode of retiring of the granules of endochrome, retained together by the delicate, transparent, mucoid envelope, the primordial utricle ; and, as is well known, this may be produced by artificial means, which is also the case with the cartilage-cells, for the cell-contents slightly and very gradually contract in a single mass, upon the application of tincture of iodine, or even under the long-continued imbibition of water. Whether the division of the nucleus precedes that of the cell, or the reverse, still remains a problem. Cartilage-cells are not unfrequently observed, containing a nucleus apparently in progress of division, and others, with a pair of nuclei near each other, and flattened upon the opposed sides, having the appearance as if the result of division of a primitive nucleus, without the slightest trace of any disposition of the cells to divide themselves. In other instances, the cells present a slight parietal indentation, without any similar appearance of the nucleus ; and in all other cases, when the cell exhibited signs of division, a corresponding change was invariably observed in the nucleus. The pair of cartilage-cells, which have originated from the primary cell, increase in size by the assimilation of nutritive matter, and undergo the same division as just described, until groups are formed as found existing in the perfected cartilage. The cell-contents continually retire, but at the same time appear to partake of the general nutrition of the cell, until in the cell-group we find the masses generally central, frequently irregular in outline, and containing more or less oil-globules, and one or two nuclei ; in this state they have been generally mistaken for the nuclei of the cartilage cells. The cells, in their progressive division, do so generally in the same line ; but also very frequently divide laterally, so that the pair of cells resulting from the division of the first, may either form a row of four or a group of four, and continue in this manner. The cause determining the arrangement of the cells into rows, instead of masses, has already been referred to ; the least resistance to their extension being parallel with the filaments of the cartilage matrix. The irregularity which exists in certain of the cell-groups, especially in the stratum lying about one-fifth of the thickness of the articular cartilage below its free surface, probably depends, in some degree, upon the pressure of the opposed cartilages of the joints. It is not meant by this, that a sudden push would knock the deeper groups out of a vertical line ; but, during the progress of division of the cells and extension of the groups, a frequently repeated or moderately continued pressure, exerted upon the free surface of the cartilage, would give them a tendency to incline to one or the other side ; and hence their obliquity, or curved or irregular character from the ordinary line, in a part of the cartilage most influenced by the pressure.

Nutrition of Articular Cartilages. When an animal or plant is small, simple in structure, or possesses few or minute, or very simple organs, it is sufficient that the body or organs be bathed in a nutritive fluid, which they may readily imbibe, to present all the phenomena of vital action ; but when the being becomes massive or complex, from the greater number and size of its organs, blood-vessels become necessary, or rather channels which divide the masses into a surface of contact for the nutritious fluid, of greater or lesser extent, depending upon the degree of organic activity displayed by the organs, which is indicated by the amount of nutritive fluid they require. If, then, we perceive an algous plant, or simply constructed animal, capable of obtaining nutritive matter from the water in which it is bathed, or the lichen from the rarer atmosphere in which it exists, without blood-vessels pervading their structure, is it not probable that in more complex animals we may have simple structures nourished in a similar

manner? The articular cartilage appears to be such an one; destitute of blood-vessels, it is bathed by fluid exosmosing from the vessels beneath its attached surface, from the circulus vasculosus at its circumference, and especially by the synovia upon its free surface. The idea of synovia contributing to the nutrition of the cartilage, may at first view appear preposterous, but, with a little consideration, will appear at least quite probable. We find all the conditions of a nutritive fluid fit for the articular cartilage in the synovia, which is particularly rich in albumen, the main element of nutrition of the cartilage. From several experiments, Dr. Leidy has found the articular cartilages quite capable of imbibing the synovial fluid. He collected the synovia from several joints of a calf in a vessel; and, upon drying an articular cartilage, and then immersing it in the synovia, he found it gradually to imbibe the fluid, and resume its former appearance. Somewhat similar experiments he tried upon several living animals,—a rabbit and a pigeon. Another experiment showed, that imbibition takes place with considerable power in this tissue. He took four pieces of articular cartilage, each about one inch square, and two lines in thickness, permitted them to dry, by which they shrunk to a little more than one line in thickness, placed them in a vessel of water, and rested upon them a stage loaded with nearly ten pounds. The next day, upon removing the stage, he found the pieces had resumed their former bulk, thus having imbibed the water with a power sufficient to raise ten pounds nearly one line; and he has no doubt the power is much greater, but how much more so, it was not convenient at the time of his experiment to determine. But, besides mere imbibition, we have all the conditions of that remarkable modification of the phenomenon, endosmosis, present in the articular cartilage, and even to its greatest intensity. Dutrochet proved long ago, that albumen dissolved in water produces endosmosis with a degree of force, not paralleled by any other organic substance, under ordinary circumstances. The synovia presents a highly inspissated albuminous fluid, separated by the articular cartilage from the much thinner liquor sanguinis of the vessels beneath. In such a condition, the power of imbibition of synovia being known to exist in the living animal, a constant endosmosing current must exist from without, and an exosmosing one from within. During the passage of the currents of fluid through the articular cartilage, nutritive or organizable in character, if any activity still exists in the life-seats, the phenomena of nutrition must be the result. From the microscopic appearance of the cartilage, we observe, that from various interstitial changes, the organic cells must retain at least a part of their wonted activity. When we consider the amount of rubbing of one articular surface upon another in a movable joint, like that of the knee or hip, under the pressure of the superincumbent mass, from year to year, we cannot help thinking that the wear of the articular cartilages must be more considerable than is generally supposed, although we really perceive but the slightest degree of diminution after a lapse of many years. A walk of some of some miles per day, through several years, will detach molecules enough from the surface of the articular cartilages, although they are kept constantly lubricated by a substance so well adapted to remove friction, to require a renewal of structure through the process of nutrition. That such a repair is constantly going on is also rendered probable, by the condition of the more superficial stratum of the articular cartilage, in which are found cells presenting the appearance of having been later formed than those more deeply situated, and this becomes more strikingly the case as we approach the free surface of the cartilage. In the deep part of the cartilage the cell-groups are large, the cells are apparently much diminished in organic power by frequent division, and the intercellular matrix is abundant, all betokening an earlier formation than the part lying more superficial to it, in which latter the cells are apparently in the progress of subdivision and formation of groups, and the matrix in comparatively small quantity, as in early cartilage. And then the occasional appearance of the development of new cells

in the more superficial cartilage, will still favour the idea of an interstitial nutrition, which though slow, is sufficient to compensate for the wear of the cartilage.

Pathological Conditions of the Articular Cartilages. As the articular cartilage contains no blood-vessels, it is not liable to inflammation; but we frequently find cases, in which there is an appearance of ulceration or corrosion of the surface of less or greater extent, or it may present numerous minute, disconnected fibres projecting from the surface of the bone, like the pile of velvet, or it may be entirely removed. All these changes may take place from either surface of the articular cartilage. The most prevailing opinion among pathologists of the present day, is that these changes are the result of solution, generally in purulent matter; and from the observations of Cruveilhier, it appears they are more rapid, if the fluid acting upon the cartilage be in a state of putrescence. While the cartilage is bathed in pus, from the catalyso-disorganizing nature of the latter, it may be gradually corroded from the surface; and from an exosmotic current of the seroid fluid of probably modified pus (scrofulous), filaments may be dissolved out and cell groups detached, or probably disorganized and dissolved out, leaving the remainder of the cartilage in the form of a layer of disconnected filaments, like the pile of velvet, as already alluded to. Should the pus or other catalyso-disorganizing fluid (modified synovia), become putrescent, then must the destruction of the cartilaginous structure be necessarily more rapid, not only from the same action being instituted in the molecules, forming the surface of the cartilage, but from imbibition; it will also set up the same action interstitially, and will be aided by the death of the life-centres, the cartilage-cells, for putrescence is ever deleterious and destructive to cell-life. Even the infusorial animalculæ and algous plants, which are generally believed to thrive most in water containing putrescent organic matter, with the exception probably of Monads and Vibrios, are absolutely destroyed by it, and it is not until the putrid exhalations cease, that they become developed within the fluid. So long as a lamina of cartilage is left upon the surfaces of the bones of a joint, and the life of the cartilage-cells is not destroyed, it is probable there may be the power of a very slow regeneration of lost substance; but if the cartilage be entirely removed, as the agents of its formation, the cells, are gone, there can be no restoration. If the bony surfaces be exposed, and pus or other catalyso-disorganizing fluid be present, the destruction of the bones is the result; if the formation of such fluid cease, and what has been formed is removed, and effusion of fibrin from the vessels of the osseous structure take place, we may have anchylosis, or irregular exostoses, from subsequent organization and deposit of osseous salts. If fibrinous matter be not effused, the vessels of the osseous structure, excited by the friction of one bony surface upon the other, may deposit a lamina upon the rubbing surface as hard as dentine, which, from continued friction, becomes highly polished. In the rupture of an articular cartilage, it is said, the fragments never unite, which fact was formerly frequently advanced in support of the non-organization of the tissue. Muscular substance, when destroyed by violence, is not restored; a lichen cut into two will not unite at the edges; nor will algous plants unite when divided. The nutrition of the parts continues, as is the case with the fragments of the articular cartilage; but two opposed surfaces of articular cartilage might almost as well be expected to unite in a joint in which there is little motion, as the two broken edges of one. When granulations occur upon the surface of an articular cartilage, which is extremely rare, they arise probably from the effusion, from the circulus vasculosus of the joint, of fibrin, extending upon the surface of the cartilage and agglutinated to it.

DEVELOPMENT OF THE PURKINJEAN CORPUSCLES IN BONE.

Dr. Leidy believes the opinion of Schwann to be correct, that the Purkinjean Corpuscle of Bone is derived from the pre-existing cartilage-cell, and that the canaliculi are prolongations or protrusions of the cell-wall. He says that the mode of development of the Purkinjean corpuscles, as noticed upon the upper or posterior border of the os frontis, is briefly as follows. After the primitive ossific rete has been formed from the deposit of the osseous salts, enclosing groups of cartilage-cells in the areola, the further deposit takes place in a fibrous or line-like course from the parietes of the areola of the primitive osseous rete, in the interspaces of the cartilage-cells nearest to, or in contact with, the sides of the areola. At this period, the cells shoot out or extend their canaliculi between the fibrillæ just formed; and then the cell-wall and the continuous walls of the canaliculi fuse with the translucent, homogeneous, or hyaline substance of the cartilage existing between the cells and the osseous fibrillæ, and with the fibrillæ themselves, by the deposit of the osseous salts. The period of the formation of the canaliculi appears to be quite definite, occuring during the deposit of the osseous salts, and not before. To such an extent is this the case, that he has noticed, in several instances, cells which had formed their canaliculi upon the side which was ossified, while upon the other side, he could not distinguish any trace of them. During the whole time of the formation of the Purkinjean corpuscles, the nucleus remains unchanged; at least, no change is perceptible in it beneath the microscope; and, by applying tincture of iodine to the preparation, which turns the nucleus brown, the perfected Purkinjean corpuscle may be detected, corresponding to the nucleus of the remaining unossified cartilage cells, not only in granular structure, but also in its measurements. After the Purkinjean corpuscle has been formed a short time, the nucleus dissolves away or disappears. The newly formed Purkinjean corpuscle is about the same size as the remaining unossified cartilage-cell, as indicated in the following measurements. Size of cell of temporary cartilage, from the unossified os frontis of a human embryo, 1-1886th of an inch; nucleus, 1-3125th of an inch; nucleolus, 1-8333rd of an inch; Purkinjean corpuscle, 1-1865th of an inch; nucleus within the same, 1-3030th of an inch.—[*Proceedings of Academy of Natural Sciences of Philadelphia*, November 1848, as quoted in *American Journal of Medical Sciences*, April 1849.]

ARRANGEMENT OF THE AREOLAR SHEATH OF MUSCULAR FASCICULI—ITS RELATION TO THE TENDON.

Dr. Leidy thinks that the arrangement of the filaments of fibrous tissue, forming the sheaths of the muscular fasciculi, and their relation with the tendon, have not been properly pointed out. From repeated observations, he has found that the filaments of fibrous tissue cross each other diagonally, around the muscular fasciculi, forming a doubly spiral extensible sheath. None of the filaments run in the direction of the length of the fasciculi, and but few are transverse. Many of the filaments of a sheath form interlacements in the same diagonal manner, with the filaments of the sheaths of neighbouring fasciculi. This arrangement is readily distinguished, if several fasciculi be drawn slightly from each other upon a plate of glass, and the intervening areolar tissue be viewed under the microscope. When the filaments reach the rounded extremities of the fasciculi, they become straight, and in this manner conjoin with the tendinous filaments originating at the extremities of the muscular fibres. The importance of this arrangement can be readily understood; from the diagonally crossing course of the areolar filaments, comparatively inelastic in themselves, the sheath is rendered elastic, thus permitting the muscular fibres freely to move without their action being interfered with; while at the point of attachment of the fasciculi, where any elasticity would

be worse than useless, from the fact, that part of the muscular action would be lost in the mere extension of an elastic substance, we find the filaments arrange themselves so as to become part of the inextensible tendon.—[*Proceedings of Academy of Natural Sciences of Philadelphia*, November 1848, as quoted in *American Journal of Medical Sciences*, April 1849.]

PRACTICE OF MEDICINE AND PATHOLOGY.

TREATMENT OF CHOLERA IN SIX OF THE PARISIAN HOSPITALS.

The *Gazette Médicale* of May 12th and 19th, contains the following account of the practice adopted by the medical officers of six of the Parisian Hospitals, in the treatment of Cholera.

I. Hôtel-Dieu. The patients who enter this institution are of all ages and of both sexes, and mostly destitute. The hospital is generally supposed to be one of the most unhealthy, being situated on the Seine, badly ventilated, and over-crowded. The medical practice is based on anatomy and physiology, as may be easily imagined when we remember that Chomel, Louis, and Rostan, teach and practise there. Their treatment is hence to a great extent uniform, and is of the following character.

For diarrhœa, most employ opium and its preparations, and astringents; and all reject emeto-cathartic remedies. To allay vomiting, they give ice, iced Seltzer water, and the anti-emetic potion of Rivière. Depression is treated by various internal and external stimulants; pain, by calmatives, and in certain cases by revulsives; the loss of warmth, by various calefacient remedies, one using the vapour bath, another the hot air bath, another the water bath, at a temperature of 40° to 42° cent. (104 to 107 Fahr.). Excessive heat, and the appearance of internal congestion, is treated by local depletion, cold water, and even by ice. With the exception of that of two of the medical officers, one of whom trusts to saline treatment, and another to emetics, the treatment adopted in the Hôtel-Dieu is of the above character, being neither specific, nor remarkably violent, nor purely empiric, but a system of physiological rationalism.

M. Chomel admits the existence of several forms of Cholera, each requiring its appropriate treatment. These are—the *nervous* form, characterized by the predominance of pain, cramps, and disturbance of the intestines; the *algide* form, by diminution of heat, and disturbance of circulation and respiration; the *gastro-intestinal* form, by the abundance of the evacuations; and the *inflammatory* form, bearing some resemblance to acute gastritis and dysentery. In the nervous form, M. Chomel administers opium by the mouth or in injections, or both ways at once if possible; if it cannot be administered in either of these ways, he employs the endermic method. In the algide stage, M. Chomel prefers dry to moist vapour baths; the latter favouring the retention on the surface of the cold clammy sweat which opposes re-action, and with diarrhœa and vomiting, tends to produce colliquation. When the hot air bath cannot be conveniently administered, he uses bags of hot sand, which have the advantage over bottles of hot-water, of being capable of being equally adapted to all parts of the surface. For similar reasons, he prefers friction with aromatic substances, benzoin, frankincense, or juniper berries. He sometimes employs friction with pounded ice, but only in cases where the algide symptoms are recent, and the patient young and of a strong constitution; in patients of weak constitution, he entirely rejects this remedy. The internal remedies which he employs are hot tea punch, alcoholic drinks, etc.; but these do not seem to him suitable when the patient complains of internal heat; in such cases, he prescribes ice, with excitants. In the inflammatory form, with heat of skin, and full, resisting pulse, he employs general or local bleeding, cataplasms to the abdomen, baths, emollient and demulcent draughts, with opium. The antiphlogistic treatment must always be regulated by the

debility of the patient, and the prostration consequent on the attack. If vomiting be abundant and frequent, M. Chomel administers ice in small fragments, or pounded, in small quantities and at short intervals, so that it may be brought into contact with the stomach in a continuous manner. Seltzer water with ice, the anti-emetic draught, sub-nitrate of bismuth, calumba, and opium, are alternately used, to fulfil the same indication. If the vomiting obstinately resist these means, he applies a blister to the epigastric region; more rarely, and only when there are symptoms of gastric inflammation, he employs cupping or leeches. Diarrhœa is treated by moderation in the quantity of drink, opiate or astringent injections, with alum, rhatany, monesia, etc.; and a large blister to the abdomen in obstinate cases. M. Chomel treats cramps by opium, used in frictions and internally. He pays much attention to dyspnœa; if it be accompanied with febrile re-action, he employs general bleeding; but if—which is much more frequent,—there be no fever, he treats it by diffusible stimulants, as ether, and nitrate of ammonia. In cases complicated at the commencement with cerebral symptoms, opium is excluded from the treatment, and revulsives are employed, as blisters on the limbs, and laxatives, if there be no diarrhœa. When debility is the prevailing symptom, the treatment consists chiefly of tonics.

M. Louis. The treatment adopted by this physician does not differ sensibly from that of M. Chomel. Besides those remedies which may be called for by certain symptoms, his method of treatment mainly consists of calefacients, viz., the hot air bath and warm infusion of mint, to restore the heat and excite the circulation; and aromatic stimulants, with injections, containing ten or twelve drops of laudanum, several times daily, to restrain the evacuations and pains. When heat is re-established, Seltzer water is substituted for aromatic draughts.

M. Rostan prefers, at the commencement of the disease, for the purpose of restoring heat, hot water baths, at a temperature of 40 to 42 cent., followed by some hot aromatic infusion, and friction of the limbs with ammonia liniment. If these means are insufficient, a mixture, containing ether, alcohol, and laudanum, is administered. Acidity of the secretions is treated by alkaline remedies, as ammonia or lime-water; vomiting and diarrhœa by opium, administered by mouth, and in enemata, containing each six drops of laudanum. In reaction, moderate bleeding is sometimes employed, but only when there are symptoms of internal congestion. In obstinate vomiting, a large blister is applied to the epigastric region.

M. Husson's treatment, which differs little from the preceding, consists in the use of hot air baths, dry frictions, and the following stimulant mixture: Infusion of limes or of mint, 120 grammes; acetate of ammonia, two to four grammes; wine of Bagnols, sixty grammes; tincture of canella, four grammes. He treats diarrhœa by opiate injections; obstinate vomiting, after reaction, by ice: and administers quinine during convalescence.

M. Martin Solon. The remedies employed in the practice of M. Martin Solon are partly adapted to particular symptoms, and partly intended to act in a special manner on the system and to modify the state of the blood. The treatment of individual symptoms comprises the use of the hot air bath on the admission of the patient, if in the algide stage, and the administration of one of the following mixtures: laudanum of Sydenham, 25 drops; Hoffmann's liquor, 15 drops; infusion of mint, 60 grammes; ammonia, 20 drops; syrup, 30 grammes; or a mixture of distilled mint-water, ammonia, powdered calumba, and trisnitrate of bismuth: these mixtures are alternated with punch. For diarrhœa, he employs opiate and albuminous enemata; and applies, immediately after the hot air bath has been used, sinapisms to the abdomen, chest, and vertebral column, to maintain warmth, or excite it, if the hot air bath have not been sufficient. To fulfil the second indication, he administers carbonate of ammonia, in doses of 30 centigrammes (about 4½ grains), six times a-day. In obstinate vomiting, he uses cupping over

the epigastrium, or a blister, which is afterwards dressed with a centigramme (about 1-6th of a grain) of hydrochlorate of morphia. Diarrhœa is treated by injections, containing trisnitrate of bismuth ; and suppression of urine by a ptisan of couch-grass and nitrate of potash. During convalescence, he gives wine of Bagnols with Seltzer water.

M. Guérard distinguishes three principal stages of the disease. At the commencement, when there are diarrhœa and vomiting, without cyanosis or cramps, whether this be only cholerine, or incipient Cholera, he uses narcotics, astringent injections, and rice-water ; and, if the prodromata continue in spite of these, opiate electuary and vinous drinks. When Cholera has obviously declared itself, he prescribes the hot-air bath every quarter of an hour ; aromatic drinks ; ice and Seltzer-water for vomiting ; lemonade, with wine, if it can be borne, to be continued also after the vomiting has ceased. To relieve the cramps, and other neuralgic symptoms, he gives ether and chloroform ; the latter remedy has appeared to him well calculated to fulfil this indication. When moderate reaction has set in, he confines himself to the expectant treatment ; if it be excessive, with symptoms of internal congestion, he employs local and general bleedings, and sinapisms. If diarrhœa persist after reaction, he treats it by nitrate of silver, in mixtures, or in injections, containing about 2½ grains.

M. Honoré employed vapour baths ; hot aromatic draughts, with syrup and ether ; Seltzer water ; dry frictions ; enemata of rhatany and laudanum ; wine of Bagnols, with laudanum, in spoonfuls ; ice : bleeding, Seltzer water, and lemonade, after reaction.

M. Léger, who has succeeded M. Honoré, adopts the saline treatment, recommended by Dr. Stevens. He gives common salt, in mixture and enemata ; the daily dose of each being from 15 to 25 grammes, until the vomiting have ceased. He states that the vomiting is generally increased at first, but soon diminishes, and usually ceases in about twelve hours. The effect on the alvine evacuations is still more rapid ; the first injections often restoring their natural bilious character. The only additional remedy which he employs in the early stage, is hot cloths, to restore warmth.

M. Tardieu at first employed sea-water in five cases, in one only of which it appeared to produce permanently beneficial results. The restoration of the bilious character of the evacuations was the most obvious effect of this treatment. He now gives stimulants, preceded by an ipecacuanha emetic, hot air baths, aromatic infusions, Seltzer water, etc. He only uses opium where the cramps and other nervous symptoms are very intense, and is very guarded in its use, from the dread of cerebral complications.

Hôpital de la Charité. The situation and internal arrangements of this hospital are more healthy than those of the Hôtel Dieu, and its inmates are mostly from a better class of the community. The medical treatment also presents more diversity.

M. Fouquier, and M. Oulmont. M. Oulmont was the first to introduce the saline treatment into the Parisian hospitals ; and he employs this method in all cases of Cholera, admitting, as an aid, only the external means of restoring warmth. His prescriptions uniformly are : common salt, 15 grammes ; gum-mixture, 120 grammes ; to be taken every quarter of an hour in spoonfuls ; and two or three enemata during the day, containing 15 grammes of salt with a sufficient quantity of water. This treatment has not, as M. Oulmont himself confesses, entirely answered the expectations formed regarding it. M. Fouquier does not seem to have adopted any exclusive mode of treatment, but to have generally given emetics of ipecacuanha, in doses of two grammes, with diffusible stimulants, and opiate injections.

M. Rayer abstains from all experiments, and employs the same treatment as he adopted in 1832. He considers the digestive organs as the chief seat of the

disease, and prescribes, in all cases, either 10 centigrammes of opium in pills, during the day; or a mixture, with from 6 to 12 drops of laudanum, and three or four injections, each containing 12 drops of laudanum; cupping to the epigastric or umbilical regions several days in succession, or even several times in the same day; venesection from the arm, when possible; iced Seltzer-water for common drink. In several cases complicated with delirium, he has opened the temporal artery, but without success.

M. Cruveilhier employs a very active and various treatment. Most commonly, he administers at first hot aromatic infusions with ether; then a combination of astringents and narcotics, with some such mixture as the following: peppermint water, 120 grammes; extract of catechu, 1 gramme; laudanum, 20 drops. For diarrhœa, he employs enemata containing from 15 to 20 drops of laudanum; and if there be local abdominal or thoracic pains, he has recourse to repeated local bleedings, until the pain have ceased. A succession of sinapisms to the limbs, and friction with a stimulating liniment, complete in general his treatment of the algide stage. In some very severe cases, almost *foudroyants*, he administers every half-hour a spoonful of the following mixture: laudanum, 3 grammes; ammonia, 5 grammes; ether, 15 grammes. The treatment in the intervals consists of draughts of hot water, sweetened with gum syrup; sinapisms to surround the limbs; a large sinapism to the abdomen, and a blister to the chest or vertebral column. M. Cruveilhier has tried the *stachys*, but without any sensible result, which may be ascribed to his having combined it with opium and other remedies.

M. Bouillaud generally adopts the saline treatment, and gives daily 15 grammes of salt in mixture, and two enemata, each containing 15 grammes of salt. The only additional means which he uses are ice and Seltzer water, and sinapisms to restore warmth. He rarely uses the hot air bath, and only when algidity is obstinate. More rarely, M. Bouillaud uses opiate enemata, with ice and Seltzer water, sinapisms and stimulating liniments. He is entirely opposed to general or local bleeding, even in the stage of reaction.

M. Briquet. All the efforts of M. Briquet are directed to the promotion of reaction, at the same time that he employs opiates for the evacuations and pains. His treatment at first consisted of the hot air bath, infusion of mint, or punch, frictions with ammonia, and sinapisms to the limbs. He has since adopted a more active method, consisting of the alternate administration of ice and hot aromatic and stimulant drinks, and alternate frictions with pounded ice and with alcoholic and ammoniacal liniments every half hour. The other indications are fulfilled by pills of thebaic extract, mixtures with acetate of morphia, enemata of starch and laudanum (6 to 12 drops), Seltzer water, etc. In some cases he has given emetics of ipecacuanha, in doses of 1 or 2 grammes. The comparative result of his treatment is not known.

M. Pidoux has not confined himself to any one method, but has employed a varied treatment. At first he prescribed, in the algide stage, diffusible stimulants with narcotics, as tea, hot infusions of lime or mint with syrup of ether and of opium, a succession of sinapisms to the limbs, etc.; ice and Seltzer water, when reaction had commenced. More recently, he employed opium in large doses, in mixture and injections; but was soon led to renounce its use, from its appearing to produce severe cerebral disturbance. Saline injections have also been tried and abandoned. M. Pidoux employed electro-galvanism in some cases, with the effect of relieving some of the more distressing nervous symptoms, as cramp, hiccup, vomiting, etc.; but he has not repeated this remedy. He has also tried the terchloride of carbon, but without sensible effect. At present, he is making experiments on the utility of trisnitrate of bismuth in diarrhœa.

Hôpital du Val-de-Grace. This being a military hospital, its inmates consist of men, generally of good constitution, and not weakened by privations or excesses. It must be remembered, however, that the present dwell-

ings of many of the soldiers in Paris do not present the most satisfactory conditions of aëration, dryness, and ventilation. The hospital itself is in a healthy situation, and its internal arrangements seem perfect.

M. Lévy, the chief physician, describes three periods in the progress of Cholera; two of which—those of prodromata and of reaction—are amenable to a rational system of therapeutics, and the third—the organic or asphyxic—is treated as yet empirically, with more or less success.

1. *Prodromata.* This period extends from the first disturbance of general health, to the appearance of cholera stools or spasmodic symptoms. There are three principal forms, each requiring appropriate treatment. *a. Nervous form*, indicated by headache, vertigo, weakness of the lower limbs, transitory epigastric spasms, transitory impediment to respiration, etc. Treatment: Repose, warm infusions, sudorifics; and if these be insufficient, ipecacuanha in emetic doses. *b. Saburral form*, indicated by *malaise*, sense of weight at epigastrium, foul mouth, anorexia, lassitude, lumbar pains, and cephalalgia. The emetic treatment is successful here, even when, besides these symptoms, there are some cramps and stools more or less typical of Cholera. If there be also *gargouillement*, or ventral intumescence, the heat and pulse being normal, M. Lévy employs laxatives, preceded or not by an emetic; by these means, he has arrested the course of some apparently severe cases, in spite of severe symptoms having occurred in addition to those of the premonitory stage. *c. Diarrhœal form*, or *cholerine:* treated by opiates, especially enemata with laudanum three or four times a day; and ipecacuanha when these fail.

2. *Developed Cholera.* This period has two distinguishing characteristics—tendency to cold and loss of pulse: but there are various other symptoms referable to the abdominal, thoracic, or cranio-spinal viscera, one or more of which may be present, giving rise to a variety in type and treatment.

a. Cyanic and algide form, with thready or imperceptible pulse; or adynamic form. This is the form presented in many sudden attacks. There may or may not have been diarrhœa and vomiting, and the patients present rapid cyanosis, with general algidity, or confined to the face, tongue, and limbs: the skin is pasty, and moistened with a cold, clammy sweat; there is extreme prostration, wrinkling of the face, hollowing of the orbits, etc. The patients make little or no complaint, but fall into a kind of coma which ends in death. In these cases, M. Lévy has recourse to the energetic use of calefacients, by directing streams of hot air on different parts of the body, and administering hot infusions, and stimulating mixtures with acetate of ammonia. In the intervals, he gives hot coffee, or wine of canella. The ptisan which he prefers, is sweetened infusion of balm, with 20 or 30 drops of tincture of canella to the quart.

b. Cyanic and algide form, with predominance of gastro-intestinal symptoms (vomiting and diarrhœa). The same external means of restoring heat are employed; but internal stimulants and hot drinks generally increase the vomiting, or at least are soon rejected. The internal remedies are, ice in fragments, effervescing lemonade; and the only stimulant which the patients seem able and willing to bear, is coffee. In almost all, who have been much exhausted by vomiting, there is severe pain in the epigastric region, and general abdominal tenderness; obstinate hiccup also supervenes. In these cases, M. Lévy employs, in addition to ice and lemonade, the repeated application of sinapisms to the epigastrium, cupping and dry-cupping, followed by laudanized poultices; if these means fail, he applies a small ammonia blister to the epigastrium, and dresses it with increasing doses of morphia. It may be remarked, in passing, that the blistered surface rapidly heals, and leaves a brownish scar, with thickening of the skin, due to the sanguineous infiltration of the part. In more obstinate cases, trisnitrate of bismuth, in doses of 1 gramme every hour, up to 10 or 12 grammes, has been found successful; it seems first to increase the intervals of, then to suppress, the

vomiting. Its action is manifest, if at all, when from 4 to 6 grammes have been taken. Diarrhœa and vomiting have been less obstinate in the patients in the Hôpital de Val-de-Grâce than elsewhere. The use of astringents does not seem to M. Lévy to be useful or benefical; but he thinks that these symptoms are to be remedied by treating the general state of the system.

c. Cyanic and algide form, with predominance of nervous and spasmodic symptoms. This is an important form, and most difficult to treat. The patients,—cold, icy, blue, or only of a bistre-tint, pulseless, tortured by cramps, breathless and anxious, from constriction of the thorax, which appears due, as well as the wrinkled countenance and sunken eyes, to muscular retraction, and who are a prey to jactitation, anguish, and severe pains,—form the greatest number of victims. Though ice-cold, they throw off the bedclothes; they complain of insupportable heat; the hot air bath becomes a punishment to them, and increases the oppression and anxiety. M. Lévy substitutes for this, jars of hot water, long continued frictions, which at the same time relieve the cramps, hand-sinapisms, moved up and down the limbs, and the internal use of hot drinks. This is, without exception, the most severe form of the disease, and that in which several new remedies have been unsuccessfully employed; viz.: electricity (by Dujardin's apparatus), ipecacuanha, in doses of from 2 to 4 grammes, hachisch, extract of nux vomica, and strychnine. M. Lévy employs here the same treatment as he did at the commencement of the epidemic, with the exception of the hot-air bath. Externally, he employs frictions of laudanum with turpentine, camphorated oil with laudanum, *baume tranquille* with chloroform, etc. For internal use, he depends more on ether and laudanum, than on acetate of ammonia.

3. *Reaction.* Clinical observations and post-mortem examinations have furnished M. Lévy with the key to the treatment of this stage. The forms and complications of reaction are in close relation with the anatomical conditions of the asphyxic stage; and the attentive study of the peculiarities presented by the latter will almost enable one to foretell and calculate on the local tendencies of the former. The cyanic or algide stage tends to produce congestions, sanguineous extravasations, ecchymoses, etc.; and when reaction takes place, the organs, which are the seat of these lesions, become subject to hypersthenia, excitement, or phlogosis; inflammation even often becomes one of the conditions of recovery. When the organs have been uniformly and moderately congested, and the reaction is gradual and continuous, there is a slight elevation of pulse, with general perspiration, and turbid or increased urine; here the expectant treatment is sufficient. Sometimes the reaction is more violent, but still general; and a kind of inflammatory fever arises, which only requires hygienic treatment and careful watching. But in a great number of cases, congestive symptoms have been confined to the brain, the lungs, or the intestinal canal. Under the first head, are classed secondary encephalic congestions, obstinate headaches, with or without fever, torpidity, most frequently accompanied by vomiting, as in hydrocephalus after cerebro-spinal meningitis; the state of drowsiness and coma which succeeds this; delirium, sometimes furious, sometimes muttering, with intervals of slumber; being in proportion to the degree of injection of the meninges, and of sub-arachnoidean and ventricular effusion. According to the degree of compression of the brain by the distension of the vessels of the periphery, and to the degree of febrile excitement, there are observed the symptoms of meningitis, of typhoid fever, of meningo-cephalitis; and the most frequent is the torpid state, with vomiting and constipation. According to the nature of the case, M. Lévy adopts the semirecumbent posture, depletion at the base of the skull, derivatives to the digestive canal (Seidlitz water, sulphate of soda, laxative enemata), and revulsives (sinapisms and blisters) to the extremities, and sometimes a blister to the nape of the neck; and in a number of cases, his treatment has been successful. Several cases of reactional pneumonia have been cured by bleeding to about 8 oz., opiate emetics, and blis-

ters. The various abdominal inflammatory complications yield readily to cupping, laudanized poultices, and hygienic means. Severe and persistent pain in the epigastric region, has been relieved by the application of ten or twelve leeches. Constipation is, more frequently than diarrhœa, accompanied with ventral irritation, and must be treated by enemata and regiminal means. Diarrhœa is the ordinary symptom of relapse, and should be carefully sought for, especially as its existence is often concealed by the patients.

Hôpital de la Pitié. The situation and internal arrangements of this hospital are healthy: but its patients are mostly of the lowest class, from a population decimated by misery, badly lodged and clothed, and ruined by every kind of excess. The modes of treatment, though not completely opposed, present great differences.

M. Serres considers Cholera as a pernicious typhoid affection. The object of his treatment is to resolve the disease into its two principal elements, to master at first the pernicious phenomena, so as only to have subsequently to treat the typhoid fever, deprived of the complication to which it owes its severity. One series of remedies is directed against the vomiting, the alvine evacuations, and the pernicious symptoms of the first period of the disease; another against the characteristic changes of the second, or typhoid period. The first indication is fulfilled by the anti-emetic potion of Rivière, Seltzer water, and citric lemonade, and starch enemata three or four times a day, containing camphor, 3 grains; sulphate of quinine, 3 grains; and laudanum, 8 drops. The specific treatment consists of daily mercurial inunctions to the abdomen, sometimes repeated several times a day, to the amount of 8 or 10 grammes of mercurial ointment; and of the administration of the following pills: Æthiop's mineral, 1 gramme; powder of tragacanth, half a gramme; to be made into four pills with syrup, and taken during the day. In addition, he uses the ordinary means of restoring heat. Opium he employs with moderation, and only in enemata, except in some very rare cases, with painful cramps, where he gives a small dose of opium, with black sulphuret of mercury. He also rarely gives ether in mixtures. The comatose phenomena of reaction are treated with sinapisms, and sometimes, when very intense, by leeches behind the ears, and laxatives.

M. Piorry. According to M. Piorry, the cause of Cholera is a poison *sui generis*, the effects of which are varied by the influence of septic agents. The intrinsic cause of Cholera cannot be remedied, but we may greatly modify the conditions of septicity which give the disease its most severe character. His treatment of the intrinsic cause is mainly prophylactic, by withdrawing healthy individuals from the epidemic influence, or removing those who labour under the premonitory symptoms from their confined and ill-ventilated habitations. The disease, once developed, exercises its influence at first on the blood, then on the digestive canal. The action on the blood he treats by demulcent drinks, exposure to pure air, and copious water lavements. The gastro-intestinal symptoms are treated by large quantities of infusions, especially tea, as long as vomiting continues, and by albuminous drinks (whites of eggs beaten up in water), to remedy the incessant loss of albumen. M. Piorry does not employ evacuants, even though they seem indicated; as he thinks them calculated to increase the debility of the patient to a dangerous extent. If the gastro-intestinal evacuations be obstinate, he applies bladders of ice to the whole of the abdomen, and hot cloths at the same time to the chest, and accompanies these with enemata of iced water. In the algide stage, he uses the vapour bath, tea, with alcoholic spirit, and copious injections of water. The indication here, according to M. Piorry, in this stage, as well as in the preceding, is to throw as much water as possible into the blood. For the phenomena of reaction, he has no fixed treatment; but

varies it according to the pathological conditions of the organs, as they manifest themselves.

M. Gendrin considers that the disease consists of five principal orders of phenomena, which are successively developed; viz.: the premonitory symptoms, which, according to him, are constant; the symptoms of excessive secretion, at the commencement of confirmed Cholera; the inspissation of the blood by the loss of its liquid constituents; the suppression of all the secretions; and, finally, febrile reaction in various forms. The indications founded on these five orders rest: 1, In the character of the precursory symptoms; which are most commonly diarrhœal, much more rarely nervous or vertiginous; 2, In the state of gastro-intestinal excessive secretion, which must be arrested; 3, In the changes which this secretion produces in the blood, which must be modified so as to maintain or re-establish a healthy circulation; 4, In the febrile complications of reaction, which must be moderated; 5, In the consecutive congestive phenomena, which are to be prevented. In the diarrhœal form of the precursory symptoms, M. Gendrin prescribes emeto-cathartics, as ipecacuanha, followed by a saline purgative, with the object of modifying the excessive intestinal secretion. If the precursory symptoms consist in vertigo, headache, general *courbature*,[1] without diarrhœa or vomiting, he prescribes a bleeding, abstinence from food, or a very moderate diet, demulcents, and a small dose of opium. In both cases, he orders rest in bed, to favour the action of the skin, and to keep the body comfortably warm. In confirmed Cholera, the first indication is, to moderate the state of secretory turgescence of the muciparous crypts of the intestinal mucous membrane; to fulfil this, he employs bleedings at the commencement. If the disease have some intensity, he prescribes, in addition, opium in large doses, in solution or in tincture. If the evacuations have been sufficiently copious to produce symptoms of cyanosis, he has recourse to stimulating liniments, with the object of restoring the circulation, and of rousing the sensibility and the exhalant function of the cutaneous surface. If, in spite of these means, the algide stage sets in, M. Gendrin employs vapour or hot-air baths only where the skin appears capable of reacting and perspiring. In the pronounced algide period, he continues the opiates, if the alvine secretions be still abundant: but considers that it is of most consequence to use tonic or simple stimulants, but not alcohol. In this period, he also depends greatly on external stimulants, as frictions, sinapisms, and blisters. With the object of giving play to the circulation, he prescribes bleeding; but as the veins allow only a small quantity of blood to escape, he leaves the vein open, and employs friction in the direction of the returning current of blood, until he has obtained some spoonfuls of blood. In the stage of reaction, the treatment of M. Gendrin differs, according as it is more or less complete and energetic. If it be incomplete, and the patient be much debilitated, and if the secretions, especially that of urine, be not re-established, he continues the use of internal and external stimulants, with the addition of sinapisms; if, on the contrary, reaction be energetic, and coma be threatened, a small bleeding is practised; if it be well established and moderate, he confines himself to the expectant treatment. The obstinate vomiting, extreme thirst, and hiccup, so frequent in this period, are treated by ice.

MM. Clément and Piedagnel generally employ the *symptomatic* method of treatment, with some modifications at the stages of commencement and reaction. At the commencement of the disease, M. Clément employs, in addition to astringents and opiates, leeching to the fundament. In the algide period, he uses stimulants with caution, for fear of exciting a too energetic reaction. In the precursory diarrhœa or cholerine, M. Clément would give

[1] There is no English substantive by which the French word "*courbature*" can be adequately translated. "*Je me sens tout courbatu*" means, "I feel sore all over."

ipecacuanha, but has not yet had an opportunity. The method of M. Piedagnel resembles that of M. Clément, except that he prefers a small bleeding to leeches to the anus. The characteristic feature of his treatment is, the employment of copious bleedings as soon as reaction sets in, so as to combat or prevent symptoms of cerebral congestion.

Hôpital Saint-Louis. This hospital is situated in a populous quarter, and its structure is generally salubrious; but the patients are generally in a bad hygienic condition, hence the cases of Cholera are numerous and severe.

M. Gibert employs, almost exclusively, the rational or natural method, which consists in fulfilling such indications as present themselves, and in following the course which nature points out in effecting a spontaneous cure. During the precursory period of diarrhœa, he employs rest, dietetic treatment, demulcent drinks, and opiate enemata. In the algide period, he uses hot aromatic drinks at first, followed by gum water with Seltzer water and ice, poultices with laudanum, narcotic enemata; and, at the same time, sinapisms, hot cloths, and frictions with laudanum over the regions troubled with cramp, so as to excite the circulation in the periphery, and to arrest the evacuations. In the stage of reaction, he applies cupping glasses to the chest and epigastrium, if there be ever so little dyspnœa, or tendency to asphyxia or coma. He does not employ bleeding, emetics, purgatives, nor specifics of any kind; and even abstains from the use of hot air or vapour baths, which seem to him as much contraindicated as in asphyxia from drowning. Cases of cholerine are treated in the same way, and, according to M. Gibert, with uniform success.

M. Devergie. The treatment adopted by M. Devergie does not entirely consist, as some imagine, in the use of truffles. He appears to treat each symptom by its appropriate remedies; cold, for instance, by the hot air bath and internal stimulants; vomiting, by ice and Seltzer water; alvine evacuations, by opiate enemata. In some cases he has tried blistering of the epigastrium by means of the long continued application of tar ointment.

A short time after the first appearance of Cholera in Paris, M. Devergie, observing that persons who eat truffles are generally constipated, conceived the idea of employing them in the diarrhœa of Cholera. He employed at first a simple decoction, made by boiling 125 grammes (about 4½ ounces) of truffles, cut in small slices, with 5 quarts of water. This forms a ptisan which, when strained, is colourless and slightly opaline; it has no disagreeable odour; and when sweetened, has an agreeable taste to the patients. More recently, he has formed a distilled water from them, which is charged with the odour of the truffles. By pounding the truffles in a mortar, and treating them with alcohol, he has formed an homogeneous mass, from which he proposed to form pills, by mixing a little sugar with the mass, and afterwards enveloping them in a layer of gelatine. Both in cholerine and in actual Cholera, M. Devergie employed truffles as a remedy for vomiting and diarrhœa; and says that some cases seem to have suddenly recovered, on the cessation of the diarrhœa and vomiting. He has, however, completely abandoned this remedy, which failed to answer his expectations.

M. Moissenet employs the saline treatment, by chloride of sodium, to which we have already referred, as employed at the Hôtel-Dieu and La Charité. In addition, he gives a ptisan of bicarbonate of soda, 2 grammes to the pint.

Hôpital Beaujon. This hospital is one of the most salubrious, but its inmates are mostly from the villages about Paris, so that the hygienic conditions of the hospital are frequently counterbalanced by misery and insufficient food.

M. Bouvier's mode of treatment is as follows. 1. To moderate the eva-

cuations by means proportioned to their intensity, and to the exhaustion which they produce; thus, by mouth, syrup of quinces in rice-water, at the commencement; by the rectum, enemata of decoction of marshmallows, poppies, or of starch, with some drops of laudanum. Against vomiting, he uses Seltzer water, the potion of Rivière, opium in small repeated doses, ice, sinapisms to the epigastrium, and a small quantity of such drink as may be agreeable to the patient. Slices of orange or citron are applied to the lips and tongue to allay thirst, if all drinks, and even ice, be rejected. Cold water is given in small quantities, if the patients prefer it. 2. To sustain the power of the system and produce derivation from the intestines to the skin, he employs light tonic drinks, stimulants, external revulsives, cutaneous irritants; infusion of tea with some spoonfuls of rum, coffee, wine of Bagnols with water, punch; sinapisms, external heat, frictions with liniment of ammonia and cantharides. Stimulants, if too powerful, exhaust the rest of the system by producing too much cerebral irritation; and should be employed with caution. 3. To prevent and combat cerebral congestion in the stage of reaction, M. Bouvier prefers cutaneous revulsives, sinapisms, blisters to the nape of the neck and thighs, with support of the powers, to bleedings. He also adds antispasmodics, and opium if there be delirium or cerebral excitement; and leeches sometimes, but only when specially indicated.

M. Legroux. The treatment of Cholera pursued by M. Legroux, is the following. 1. To restore warmth, and reanimate the patient, he employs hot cloths, in preference to bottles of hot water, which appear to him more hurtful than useful. At the same time, he gives hot drinks of tea with a little rum, etc.; often also with a little syrup of ipecacuanha. These means generally produce prompt reaction. 2. When reaction is established, he gives cold iced drinks, which the patients take with eagerness. 3. At the same time, he gives a mixture with a small proportion of opium, to be taken by spoonfuls, and followed immediately by pills of tannin, to calm the nervous symptoms and diminish the intestinal excretions; also enemata containing laudanum and tannin, several times in the day. 4. When the patient has a certain amount of strength of pulse, he often practises bleeding at the commencement, which he does not hesitate to repeat if there be febrile reaction, especially when there is coma. The blood which flows is generally glutinous; local bleedings by cupping or leeches are often employed by him in cerebral complications, as well as blisters to the lower limbs. 5. In some cases, where the dull intestinal sound indicates their being filled with the Cholera matters, he has employed, with advantage, castor oil, alone, or with calomel. 6. Having observed in some cases a sort of alternate remission and exacerbation, he adds sulphate of quinine to the opiate enemata. 7. In cases of obstinate vomiting, he applies a blister to the pit of the stomach. 8. Obstinate diarrhœa is treated by enemata containing a solution of nitrate of silver. 8. As to most of the remedies whose success has been declared wonderful, he has almost abandoned them, convinced that the modifications introduced into the system by Cholera can by no means be cured by a single specific.

Hôpital de Gros-Caillou. The general conditions of this hospital much resemble those of the hôpital de Val-de-Grâce.

M. Durand, at the commencement of the epidemic, employed hot air baths, stimulating aromatic infusions with acetate of ammonia, sulphuric ether, and laudanum, stimulating frictions, sinapisms, etc. When reaction had commenced, ipecacuanha in fractional doses, with opium; and when it was established, purgatives by mouth and in enemata, and sanguineous depletion when the congestive symptoms were very intense. But, having perceived that the most severe cases were those unattended with vomiting, and that the administration of stimulants tended to put off the excitement of

vomiting, by reason of the increasing inertia of the stomach; and also having observed that laxatives given too soon after the algide stage, as well as the cold drinks to promote their action, tended to maintain the algide state, he has modified his treatment, so far as it relates to this stage. The patient, on admission, is clothed in a shirt of swanskin (*molleton*), and woollen stockings; and has administered to him the hot air bath, and 2 grammes of ipecacuanha in two doses. After this, to favour vomiting and promote diaphoresis, M. Durand gives a mixture of infusion of ipecacuanha with tea and spirits, to be taken very warm. Diaphoresis is generally soon established. He does not fear to return to the use of ipecacuanha, if the patient still complain of a sense of fulness in the stomach. He considers it advantageous to provoke vomiting, whenever there is nausea. If reaction do not come on after the use of emetics, he prescribes 15 grammes at a dose of the following mixture: root of gentian, of elecampane, of angelica, of acorns, each 45 grammes; Hollands gin, 1 quart: macerate for three days. He also gives a tablespoonful of the following every quarter of an hour: distilled mint water, 100 grammes; sulphuric ether, 4 grammes; acetate of ammonia, 4 grammes; and, if there be cramps and agitation, laudanum, 1 gramme. This is alternated with very hot tea, to which spirits are added. For ptisan, he gives infusion of orange with acetate of ammonia. When moderate reaction is established, he withdraws the heating drinks, and gives hot tea without alcohol. When it is excessive, he gives purgatives of Seidlitz water, or manna with sulphate of magnesia, followed by large quantities of sweetened barley water, or sulphate of magnesia in cold tea. For some time, he has employed lemonade or citrate of magnesia, in place of Seidlitz water. At the same time he gives daily three enemata with senna and sulphate of soda. He repeats these purgative remedies if coma sets in, and at the same time applies lotions, containing water, camphorated spirit, and salt, to the head. He also applies leeches to the temples, and gives salt in barley water; and, under its influence, the tongue, though clammy or dry, has become freely moist. The obstinate continuance of vomiting is treated by Seltzer water, sometimes combined with alum. Obstinate diarrhœa has been arrested in some cases, by the administration of enemata containing acetate of lead. Where comatose symptoms have been manifested in paroxysms, M. Durand prescribes sulphate of quinine in mixture or in enema.

M. Worms. In the algide stage, although the means used by M. Worms are very numerous and varied, their general character is that of being powerfully stimulant. He gives a mixture consisting of sulphuric ether, 15 grammes; liquid ammonia, 3 grammes; tincture of capsicum, 1 gramme; treacle, 15 grammes; camphor, 2 decigrammes; infusion of mint, 120 grammes. He also applies fomentations to the limbs of a solution of $1\frac{1}{2}$ gramme of camphor in 120 grammes of rectified spirit and 300 grammes of acetic acid: and a plaster to the epigastrium, consisting of treacle, 15 grammes; balsam of Peru, 15 grammes; and essential oil of mint, 8 grammes; to be laid upon a hot brick. He gives also infusion of limes and of mint as a drink; hot applications to the feet, etc. This treatment is generally preceded by the administration of an emetic of 2 grammes of ipecacuanha. When reaction is at hand, in order to prevent cerebral complications, M. Worms applies to the head, by means of flannel, the following lotion: camphorated spirit, 150 grammes; liquid ammonia, 25 grammes; hydrochlorate of ammonia, 45 grammes; dissolved in infusion of arnica, 190 grammes. When reaction is established, he substitutes for the internal stimulants a mixture containing spirits of balm, and camphor; and, at a later period, a mixture of nitrate of potash, 4 grammes, camphor, 2 decigrammes, in 120 grammes of any proper vehicle; or rather, a mixture containing carbonate of ammonia and camphor. He uses laxative enemata, in proportion to the intensity of the congestive phenomena.

The following table shews the comparative mortality at the seven hospitals, of which we have described the treatment, up to the 5th of May:

	No. of Cases up to May 5.	Deaths.	Recoveries.	Under treatment.	Mortality per cent.	Recoveries per cent.	Ratio of recoveries to deaths.
Hôtel-Dieu	415	210	118	87	0·50	0·29	0·58
Hôpital de la Charité..	274	154	57	63	0·56	0·21	0·37
——— deVal de-Grace	227	57	98	72	0·25	0·43	1·72
——— de la Pitié....	272	137	87	64	0·50	0 32	0·64
——— Saint-Louis ..	237	113	46	78	0·47	0·19	0·40
——— Beaujon ...	133	83	19	31	0·62	0·14	0·22
——— Gros-Caillou..	270	90	87	93	0·33	0·32	0·97

TOTAL SUPPRESSION OF URINE DURING SEVEN DAYS: MILDNESS OF THE TOXÆMIC SYMPTOMS: RECOVERY.

Dr. W. S. Oke, physician to the Royal South Hants Infirmary, details a very remarkable case of this description in the *Provincial Medical and Surgical Journal*, for 16th May 1849. We do not agree with Dr. Oke in thinking that "the removal of the suppression cannot fairly be attributed to any of the means employed." The use of stimulating diuretics was likely to prove *injurious;* but the embrocation and the cupping *must have relieved the renal congestion,* which was very probably augmented or kept up by the medicines administered. Cautious purging, fomentations and cupping over the loins, would, in our opinion, have comprised the orthodox treatment. The small amount of cerebral oppression is remarkable. The following is an abridgement of Dr. Oke's paper:

Dr. Watson states (Lecture 77), that "this affection usually occurs in persons who are advanced in life, and inclined to corpulency." He says:— "Sir Henry Halford has related one of five instances of this disease that he had met with in the course of twenty-seven years; he says it was an exact copy of all the others that had fallen under his notice. As his account of the general course of the symptoms coincides with the statements of other writers, I may give you his narrative in lieu of a formal description."

"A very corpulent robust farmer, of about fifty-five years of age, was seized with a rigor, which induced him to send for his apothecary. He had not made water, it appeared, for twenty-four hours; but there was no pain, no sense of weight in the loins, no distension in any part of the abdomen, and therefore no alarm was taken till the following morning, when it was thought proper to ascertain whether there was any water in the bladder, by the introduction of a catheter, and none was found. I was then called, (says Sir Henry), and another inquiry was made some few hours afterwards, by one of the most experienced surgeons in London, whether the bladder contained any urine or not, when it appeared clear that there was none. The patient sat up in bed, and conversed as usual, complaining of some nausea, but of nothing material in his own view, and I remember that his friends expressed their surprise that so much importance should be attached to so little apparent illness. The patient's pulse was somewhat slower than usual; and sometimes he was heavy and oppressed. I venture to state (continues the author), that if we should not succeed to make the kidneys act, the patient would soon become comatose, and would probably die the following night, for this was the course of the malady in every other instance I had seen. It happened so; he died in thirty hours after this, in a state of stupefaction."

Dr. Oke quotes this case in detail, representing as it does the five fatal instances met with by the late Sir Henry Halford, that the case about to be related may be compared with it. It shows that the constitution may tolerate excrementitious poison in the circulation for a much longer time.

A gentleman, seventy-five years of age, of short stature and spare habit of body, had suffered severely at times from disordered function of the urinary organs, but for many years past had enjoyed an exemption from his complaint by abstemious diet, and taking alkalines. Supposing that he had completely got rid of it, he ventured to return to his former habit of incautious living. He became again subject to the same symptoms, and in one of these attacks, at the latter end of October last, he was attended by Mr. John Rushworth Keele. Total suppression of urine had taken place, and Dr. Oke was requested by Mr. Keele to meet him in consultation on the 31st of October. The attack was preceded by rigors, followed by symptoms of renal obstruction. The warm bath, with other suitable means, had been tried; and the catheter had been introduced, but no urine was found.

When Dr. Oke and Mr. Keele saw the patient in consultation, the following facts were noticed:—No urine had passed since the 30th; there was no distension of the pubic region; and upon another cautious and facile introduction of the catheter by Mr. Keele, the bladder was found quite empty; there was no pain nor uneasiness of the loins, along the ureters, or in the course of the spermatic nerves; neither was there any contraction of the cremaster muscles; but there was a more frequent desire to make water than is natural, and he required the vessel to be handed instantly, "lest (according to his words,) the urine should flow over the bed." Each effort was exceedingly straining and painful, as in dysuria, and caused him to cry out loudly; but the only result of his efforts was a few drops of bright blood. The system was but little disturbed; the tongue moist, and not much furred: the pulse about 90 in the minute, and regular; the skin cool; and what was very remarkable, although he had been a person of a very irritable temper, he had now become subdued, placid, and composed. Supposing from the patient's advanced age, that the suppression may be caused by atonicity or degeneration of the structure of the kidneys, we decided on first trying the effect of stimulant diuretics. ℞. Olei terebinthinæ purificati, guttas xv.; Tinctr. hyoscyami, m. xxv.; aquæ cinnamoni, oz. j. misturæ acaciæ, q. s., bene miscend. Capiat hanc dosim quartâ quâque horâ. Infricetur subinde lumborum regioni linimentum terebinthinæ. At an evening visit, finding that there had been no action of the kidneys, the following was ordered, with a repetition of the warm bath. ℞. Pulveris ipecacuanhæ compositi, gr. iv.; nitratis potassæ, gr. x.; misturæ acaciæ, syrupi simplicis, singulorum dr. j. misturæ camphoræ, oz. j. Misce pro haustu quartis horis sumendo. Capiat cras mane olei ricini oz. ss.

November 1st. He has passed a tranquil night, with snatches of sleep; the bowels have been moderately acted upon; the same strainings of the bladder continue; but there has been no secretion of urine. He has been sick and has vomited. Sumat haustum sequentem inter effervescentiam, quartâ quâque horâ cum granis quindecim acidi citrici in aquæ pauxillo solutis. ℞. Sodæ sesqui-carbonatis, scr. j.; Liquoris opii sedativi min. spiritûs ætheris nitrici, m. xx.; syrupi simplicis, dr. j.; aquæ destillatæ, oz. j. misce. In the evening he was much the same in every respect; no urine has passed. Repetatur balneum tepidum et pergat in usu eorundem medicamentorum. Repetatur olei ricini, oz. ss., primo mane.

November 2nd. The vomiting continues, and there is the same ineffectual straining to make water, voiding only a few drops of blood. Between these distressing efforts he lies down in his bed calm and composed. The tongue is somewhat furred, and the pulse between 80 and 90 in the minute. The bowels have not responded to the castor oil. Applicentur cucurbitulæ cruentæ regioni lumbali, et injiciatur per anum enema purgans. He was also directed to take a dose of some aperient pills, to which he had been accustomed, if the bowels should require them.

November 3rd. The strangury, suppression, vomiting and constipation, continue as yesterday. He remains composed in the intervals of endea-

vouring to pass water, but there is no tendency to coma. Repetantur balneum tepidum, enema purgans, et pilulæ aperientes.

4th. The symptoms continue with but little variation ; the stomach resists everything, and he is evidently weaker ; not a drop of urine has been passed. The catheter is once more easily and cautiously introduced for the satisfaction of his relations ; but no urine whatever was found in the bladder, and no blood followed its withdrawal.

During the 5th and 6th, he went from bad to worse. The matter evacuated by the stomach became dark and fœtid ; an urinous smell was perceptible in the breath ; the pulse fell ; the temperature of the extremities was diminished ; and his mind wandered. On the evening of the 6th, there was no improvement in any respect ; and he appeared fast approaching the moribund state.

On the morning of the 7th, Dr. Oke called, as he supposed, for the last time, but I found that during the night he had passed an ordinary chamber-vessel nearly full of urine, somewhat tinged with blood; and instead of the subdued and placid manner exhibited during the whole time of the suppression, his natural irritability of temper had returned. Upon congratulating him upon so great a change, he exclaimed,—" Better, Sir, better ! how can that be possible, when it must be evident that I am sinking into the grave every moment !" In this, however, he was mistaken, as the kidneys continued to act, the vomiting subsided, the bowels resumed their functions. He still occasionally suffers from dysuria ; but there has been no return of the ischuria renalis.

Dr. Oke says, " I shall not go into the question of the proximate cause of the renal obstruction, as such an inquiry would be merely hypothetical and inconclusive ; neither shall I allude to the treatment as having been successful, as the removal of the suppression cannot fairly be attributed to any of the means employed."

OCULAR APOPLEXY.

In the *Journal de Médecine et de Chirurgie Pratiques*, for January 1849, a case is recorded as having occurred in the practice of M. Malgaigne, at the Hôpital St. Louis, in Paris, in which the patient (a little sweep, under treatment for fracture of the radius), was seized with dazzling and loss of sight. M. Malgaigne attributed this sudden blindness to apoplexy of the ocular nervous system, and prescribed fifteen grammes (about four drachms) of a compound tincture of jalap, and mustard pediluvia. In three days, sight was restored.

These nervous apoplexies of the eye differ from sanguineous apoplexies, in the absence of any obvious alteration in the appearance of the diseased organ ; the dilated pupil alone revealing the injury. In sanguineous apoplexy, on the other hand, the globe of the eye presents the appearance of an effusion of blood, or of a scorbutic ecchymosis. M. Malgaigne has met with two or three cases at the Bicêtre, in which old persons in good health, and without any headache, were struck with blindness during the night, so that, in rising on the morning, they were, to their great surprise, incapable of distinguishing anything. In these cases, where the eye was red and somewhat painful, the blindness continued. This result is worthy of notice, for the functions of the eye are sometimes regained in apparently much more unfavourable conditions. As an instance of this, M. Malgaigne has seen an old man, one of whose eyes had been crushed without laceration of the cornea. The organ seemed entirely destroyed ; so much so, that the patient brought an action against the person who had injured him, and gained a verdict with damages. However, at the end of a year, light began to appear, and the patient finally recovered his sight. An interesting case, bearing on this point, will be found recorded at page 586 of this Journal.

TREATMENT OF EPILEPSY BY COTYLEDON UMBILICUS.

Of late it has become the fashion to prescribe various preparations of the Cotyledon Umbilicus as a remedy in Epilepsy, and the fact of its possessing a certain amount of control over the disease has been fully established. It does not, however, appear to have greater virtues than oxide of silver, ammoniuret of copper, indigo, and other medicines; all of which, within certain limits, have undoubted efficacy. When the therapeutic value of the plant has been more fully elucidated, we intend to return to the subject. In the mean time, it may interest our readers to be referred to a short paper by Dr. Bullar, in the *Med. Gazette* for 18th May, 1849 (p. 858), where he states, that Mr. Randall, chemist, Southampton, prepares an extract which may be used in five-grain doses twice or thrice daily. Various preparations of the plant may be had from Mr. Hooper, and other London pharmaceutists; as is stated by Mr. Salter, in the *Medical Gazette* for May 11th.)

THERAPEUTIC ACTION OF ACONITUM NAPELLUS.

The following is an abridgment of papers, by M. Tessier, on this subject, in the *Gazette Médicale de Lyon*, for 15th and 31st January 1849:

Aconite has three modes of action, viz.: a *narcotic*, an *antiphlogistic*, and a *special action on the skin*.

1. Narcotic Action. Some deny that Aconite acts in this way; but, nevertheless, the fact is incontestable. It is sufficient to place some drops of the tincture on the tongue, to be satisfied of the narcotic action on the nervous system; for it excites a very decided feeling of numbness in that organ. Besides, when a full dose is administered, it is no uncommon thing to observe delusions, vertigo, collapse, and delirium,—in fact, such effects are known to follow opium and poisons from the family *Solaneæ*. In painful diseases, too, it often gives a wonderful immunity from pain. I have administered Aconite in a great number of painful diseases—in dull pains in the bones, in facial neuralgia, in toothache, sciatica, cancer, etc.; and have observed effects, which from their diversity well merit attention. While morphia, with a few very rare exceptions, calms every species of pain, Aconite only relieves a certain special class. Thus I have never been able, by means of it, to assuage the pain of exostosis, cancer, myelitis, nephritis, gastralgia, or whitlow; but, on the other hand, I have obtained the best results from its use in such painful affections as have a catarrhal or rheumatismal cause, along with disordered function of the skin, such as rheumatism, angina, toothache, etc. Aconite is, then, in a certain class of cases, a narcotic agent *(agent stupéfiant)*, but this action is subordinate to another, afterwards to be spoken of.

2. Antiphlogistic Action. The reality of this mode of operation is believed in by Dr. Fleming; Dr. Giacomini, who places Aconite among the hyposthenic arterial remedies; and the homœopaths, who affirm that this medicine may be used as a substitute for bleeding in the most urgent cases. To solve the question, as to the existence of antiphlogistic properties, it will not do, (like Dr. Fleming,) to choose cases of rheumatism, bronchitis, pneumonia, erysipelas, or neuralgia, all of which can usually be cured without the abstraction of blood: but we must take diseases in which bleedings are regarded as indispensable, as inflammation of the brain, apoplexy, peritonitis, hypertrophy of the heart, inflammatory fever, and ophthalmia from the introduction of a foreign body into the eye. In my experiments with Aconite on the latter class of cases, I have not met with a single instance in which the Aconite could usefully be preferred to bleeding. I have also given it in active hæmorrhages, in hæmoptysis, and in menorrhagia—and without any advantage. From my observations, Aconite does not appear to be more suitable to the plethoric: and upon the whole, I am inclined to think that it answers

best with persons of a nervous or lymphatic temperament, and especially with those predisposed to rheumatismal and catarrhal affections. I do not, however, maintain that Aconite *never* acts as an antiphlogistic: for by and by I am going to mention cases in which it has sensibly reduced the pulse; but then I will show, at the same time, that the action on the circulation was *indirect*, and that it is by regulating another function that aconite diminishes fever.

3. Action on the Skin. If the principal therapeutic action of Aconite be neither narcotic and calmative, nor antiphlogistic, what is it? My reply is, that *the special action of Aconite is on the skin.* It possesses the property of eliminating from the vessels of the skin the hurtful matter, and of re-establishing the cutaneous functions when deranged by checked transpiration or by some virus. I think that it has the special power of controlling diseases arising from cold, and others in which a morbid principle is retained in the cutaneous tissues, as occurs in the exanthematous fevers. It is a suitable medicine in all those diseases in which the function of the skin is disordered, as in articular and muscular rheumatism, as well as in rheumatism of the nerves, including sciatica and odontalgia; also in affections of the mucous membranes, such as bronchitis, etc.; likewise in the exanthemata.

Diseases in which Aconite is used. Courbature.[1] A bruised feeling in the limbs, creeping sensations on the surface, lassitude, headache, and general discomfort, constitute the group of symptoms called by this name: and they are also symptoms which specially indicate the use of Aconite. The desired relief will generally follow, by taking daily from five to ten drops of the alcoholic tincture in a little water or bland vegetable infusion.

Catarrhal Fever, as Hufeland showed, is caused by the suspension of the active functions of the skin. Its physical characters are—alternations of heat and cold, dragging pains in the limbs, increased frequency in the desire to make water, a tendency to sweat, general fever complicated with a local affection, which is generally coryza, angina, or bronchitis. The therapeutic indications are, 1st, To re-establish the functions of the skin; 2nd, To subdue the irritation of the nose, throat, and bronchial tubes. Aconite fulfils all these intentions. In catarrhal fever, as in *courbature*, it causes the pain in the limbs, the shiverings, and the heats, to subside, and, at the same time, greatly simplifies the progress of the affection of the mucous membrane. But Aconite does not, unaided, fulfil the second intention, which requires the assistance of opiates, blisters, or such other means as may be suitable.

Angina and Acute Bronchitis. Like MM. Tessier of Paris, and Gabalda, the author has seen Aconite of much service in these affections, by diminishing, in the former, the pains of deglutition, and in the latter, rendering the fits of coughing much less distressing.

Rheumatism. To have a correct appreciation of the action of Aconite in rheumatism, it is necessary to discriminate between the different forms of rheumatism, for it is very far from possessing the same influence over all of them. The cases in which it succeeds best are—recent rheumatic pains, unaccompanied by swelling and fever, or in which these symptoms are slight. In them, it possesses very great efficacy, and is preferable to bleeding; also to inoculation with morphia, or the use of belladonna; which drugs are mere palliatives of pain. In acute articular rheumatism, accompanied by decided swelling of the joints and ardent fever, Aconite is of less value. At the onset, however, of such attacks, it may be administered with advantage for the purpose of diminishing the afflux of blood [*la fluxion*] to the joints; but when the synovial membrane and the fibrous and ligamentous structures of the joints become inflamed, Aconite is useless, and in my opinion the best treatment is by large doses of nitrate of potash. In chronic apyrexial rheumatism, the results are good, though not so striking as in recent attacks. By persevering in the use of Aconite for six weeks or two months, obstinate

[1] *Vide* note, p. 570.

rheumatic pains, which have existed for years, may be subdued. Aconite, besides being remedial, possesses preventive properties, by its decided influence over the rheumatic diathesis. When given with this view, it must be continued for months. In all rheumatic affections, but especially those which are chronic, the doses must be much larger than those which are suitable in the diseases formerly spoken of. It is necessary to begin with 10 or 20 drops of the alcoholic tincture, and to increase the quantity up to 4, 6, or 8 grammes.[1]

Eruptive Fevers. In these affections, as in catarrhal fever, the pulse is brought down: the eruption is also made to come out better. The beneficial influence of Aconite on the progress of the exanthemata, has already been mentioned, in a work published at Lyons—*La Pharmacopée de Vitet.* It does not appear whether the discovery of this property of the medicine belongs to Vitet, or whether it was stated by him at second hand.

Erysipelas. I agree with Drs. Fleming and Gabalda in believing, that Aconite diminishes the duration and the danger of this disease. I would wish to call the attention of surgeons to its value in erysipelas attacking wounds; so that my observations may be verified. I have several times seen a prompt and remarkable amendment follow the daily use of from 10 to 20 drops of the tincture, in cases of erysipelas, spreading around wounds and ulcers, and accompanied by severe constitutional symptoms.

Pneumonia. I agree with Dr. Fleming and the homœopathic writers in considering Aconite very efficacious in this disease.[2] When administered at the commencement, it tends to restore the suppressed transpiration from the skin, and may thus give a milder character to the disease: but if inflammation have actively set in—if auscultation reveal engorgement and condensation—we must not anticipate resolution from the exhibition of Aconite.

Mode of Administration. I am truly astonished at Dr. Fleming recommending the largest doses to be used when an antiphlogistic, rather than an anodyne or narcotic, effect is desired. However much I respect so distinguished an authority, I must state that my practice is entirely different. In a case of rheumatism, neuralgia, or any other affection in which I wish the calmative properties of the medicine, I give from 10 to 20 drops of the tincture, and gradually augment the dose to 3, 4, 5, or even to 8 grammes in the day; but, on the contrary, when I give it in the *courbature* or catarrhal fever, I order only from 5 to 10 drops in the twenty-four hours, and by such doses I bring down the pulse, and diminish all the other febrile symptoms, without inducing any symptoms of poisoning. I prefer the tincture, as more certain than the extract. The tincture diluted with one or two parts of water, may be applied topically in neuralgia; but used in this way, Aconite is an uncertain remedy.

SEPARATION OF THE STOMACH FROM THE ŒSOPHAGUS.

Mr. Flint, a medical student in the Jefferson Medical College, describes the following strange case in a letter to Professor Dunglison:—"The patient

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[1] Let us caution our readers not to use the tinctures in common use in this country in such doses. No physician ought to prescribe Aconite, without minutely specifying the preparation he intends to be used. That which we prefer, is Dr. Fleming's *Tincture of the root*, which is transparent, in colour like sherry wine, and of a slightly bitter taste. The following is the formula. "Take of root of A Napellus, carefully dried, and finely powdered, sixteen ounces troy; rectified spirit, sixteen fluid ounces; macerate for four days; then pack into percolator; add rectified spirit until twenty ounces of tincture are obtained." Dose, from three to five minims in repeated doses.

[2] Why couple Dr. Fleming with homœopathic writers? In this country the homœopathists give, or pretend to give, their medicines in infinitesimal doses; and their practice is therefore only sanctioned by charlatans, or persons of morbid credulity. Dr. Fleming exhibits no tinge of homœopathy, and his work is most valuable and trustworthy.

was a male child; aged seven years; sick about three weeks; symptoms of worms were prominent—one was passed; cerebral symptoms followed, which terminated in death. Coma and unconsciousness were prominent symptoms for ten days previous to death. When roused from this state, he would eat a small quantity of gruel. He was treated for worms and cerebral symptoms. On the 4th inst., thirty-six hours after death, I opened the body in the presence of the attending physician and a member of this class. We carefully examined the intestines, beginning at the rectum and tracing the tube up to the connexion of the duodenum with the stomach, without meeting with a worm of any kind; but we noticed marked inflammation of the small intestines. We next directed our attention to the stomach itself, which, to our surprise, was found to be severed from its connexion with the œsophagus, and its contents, a dark-brownish mucilaginous-like fluid, poured out into the cavity of the abdomen to the left of the spinal column. We were not prepared to meet with a lesion of this character, and could account for it only by the action of the gastric acids producing *ramollissement* of this organ after death. In this opinion we were confirmed by the appearance of the liver; for besides evident marks of acute inflammation, the inferior edge of the left lobe, which had been in contact with the gastric fluid, was corroded and corrugated." [*Medical Examiner*, December 1848, p. 715.]

SURGERY.

CASE OF TRAUMATIC LESION OF THE GLOBE OF THE EYE.

Dr. Rivaud Landreau, of Lyons, relates the following remarkable case in the *Gazette Médicale de Lyon* for 14th February 1849:—On the 14th of August 1847, Madame Peyronnier, a portress, in endeavouring to separate two men who were fighting, received from one of them a blow with the fist in the left eye. The immediate consequence was abolition of vision, and the production of a swelling at the internal angle of the eye; this was followed by ecchymosis of the membranes of the globe and of the palpebral tissues. Severe pain was at the same time felt in the injured organ. Medical assistance having been immediately procured, leeches were applied around the orbit, and cold lotions to the eye; and an opiate mixture was ordered. Some days after, a purgative was administered, and a blister applied behind the right ear. These means having produced no relief, the patient consulted M. Landreau on the 21st of the month. On examination, he found, at the internal angle of the eye, close to the junction of the cornea with the sclerotica, and very near the centre of the palpebral opening, an ovoid tumour, of the size of a round pea, with a reddish base, and a slightly flattened summit, presenting a well-marked yellowish tint. Entirely surrounding the base of the tumour was a large violet-coloured ecchymosis, embracing the whole of the larger angle. In the anterior chamber, at its inner and lower part, were some drops of florid blood. The *tomentum* covering the anterior surface of the iris was dull and greyish; and, towards the lower part, and a little internal to this membrane, there was a partial laceration of the iris, of about the size of a millimetre (about 1-25 of an inch), having the form of a reversed V. The pupil was dilated to about double its usual dimensions, black, and perfectly immoveable. Vision was destroyed, from amaurosis. The transparent cornea was healthy, and the deeper humours of the eye appeared to be uninjured. The sclerotic and conjunctiva, at the smaller angle, shewed no vascular injection; the eyelids had the yellowish tint which usually follows bruises. The patient complained of violent pains in the injured organ, and in the whole of the corresponding side of the head. The tumour before described felt hard and resisting, but gave a sensation of slight fluctuation at the summit; which, with its yellowish tint, indicated the presence of pus. M. Landreau, however, hesitated to open it, being uncertain as to its nature; and, on attentively examining the globe of the eye, he thought he

perceived the absence of the crystalline lens, from an unusual depth of the posterior chamber, together with an oscillatory movement of the iris. Hence he imagined, that the blow on the eye might have produced rupture of some of the fibres of the sclerotica, and thereby occasioned an aperture sufficiently large to allow of the escape of the crystalline lens. It was probably, then, this latter body which produced the tumour under the layer of the conjunctiva. Acting on this hypothesis, he made a small opening over the tumour with a cataract knife. A drop of pus escaped, and he drew out at the end of his instrument a body, which he recognized as the crystalline lens, in an entire state. The tumour immediately disappeared; and there only remained some puffiness of the conjunctiva. The eye was ordered to be kept wet with cold lotions, and a purgative to be taken the next day. The patient was completely free from pain at the end of forty-eight hours, and there was little or no consecutive inflammation. The ecchymosis followed the usual course; and, in about eight days, all traces of it, or of inflammation, had disappeared.

The permanent effects of the injury have been perfect immobility of the pupil, and mydriasis, both resulting from the injury of the iris, which has resisted all means tried to remedy it. The laceration still exists, but is somewhat smaller. The retina has, under the influence of stimulant remedies, so far recovered its power, as to enable the patient to see with the aid of cataract glasses.

M. Landreau explains the phenomena of this case by supposing, that the blow on the eye was perpendicular, and in a direction from the temple towards the nose. Its immediate effect was the violent compression of the globe, and the crushing of the humours from without inwards. The sclerotic at the inner angle was forcibly compressed against the bony floor of the orbit, and its fibres were thereby distended and torn. Then the crystalline lens, violently detached from its suspensory ligaments, was forced through the laceration in the sclerotica; and, by the motion of return of the humours from their state of compression, was lodged under the conjunctival membrane. The violence of the blow also explains, in a very natural manner, the rupture of the ciliary attachments of the lower part of the iris, and the partial laceration of that membrane. The effusion of blood in the anterior chamber no doubt arose from the rupture of some of the vessels of the iris, when it was lacerated. It is also evident that the instantaneous paralysis of the retina, and the mydriasis, were effects of the compression and of the blow. There are two remarkable circumstances in this case: *first*, the absence of acute ophthalmitis, either external or internal; and *secondly*, the complete restoration of the function of the retina, after such a sudden and complete amaurosis.

EXCISION OF THE CLAVICLE.

Mr. H. G. Potter, Surgeon to the Newcastle-upon-Tyne Infirmary, relates the following case in the *Medical Gazette* of April 6, 1849:—Agnes Thompson, ætat. 42, married, and the mother of several children, was admitted into the infirmary, Sept. 21, 1848. She stated that her health was very good until about ten months ago, when she was much debilitated by continued night-watching, in consequence of illness in her family. She then felt, for the first time, rheumatic pains in the left arm, but did not notice any enlargement of the clavicle until between three and four months afterwards, when she perceived a small firm swelling about the middle of the bone. From that time the tumour has gradually increased in size, attended with lancinating pain, which is always worse at night, and prevents her from sleeping. The pain now extends down the arm, and has so impaired the use of the limb, that she is unable to perform her household duties. This pain, and consequent loss of sleep, have greatly injured her health, and she has now a very cachectic appearance.

The middle portion of the left clavicle was much enlarged, and painful to

the touch; it had a firm and inelastic feel; about an inch at each extremity was free from swelling. There was no evidence of any syphilitic taint in the system, nor did it appear that there was any hereditary tendency to disease in the family. Liniments and various other remedies had been tried, without any good effect. Leeches, and the internal use of iodide of potassium, were now tried, but no improvement took place; and, on the 31st of October, the tumour seemed even larger than it was a month before: it was also more painful.

Fearing that the disease might be malignant, and finding that the patient's health was daily becoming more impaired, Mr. Potter determined to remove the bone without further loss of time. The following operation was therefore performed:—

An incision, commencing at the sternal end of the clavicle, was continued throughout the entire length of the bone. Two other incisions were next made at right angles to the first, at about an inch from each end, and the flaps carefully dissected back. An aneurismal needle, armed with a stout thread, made fast to the eye of a fine chain-saw, was now passed beneath the clavicle, at about half an inch from its sternal end; and the saw by this means introduced below the bone, which was then sawn through. Disarticulation of the acromial end was next effected, and a loop of string fastened to the bone, so as to raise it up while the remaining portion was separated from its attachments. No vessel of consequence was wounded, and no ligature was required. On examining the bone after removal, the disease was found to be caries, which had extensively affected the under surface. It was also found that the whole of the diseased portion had been taken away. About half an inch of the sternal end was left attached to the sternum. No pain was felt during the operation, chloroform having been administered with perfect success. The lips of the wound were brought together with sutures and straps of plaster, over which, lint dipped in cold water, and a bandage, were applied. The arm was also properly secured to the side. The patient rapidly recovered, and left the infirmary in a month. On the 15th March, she was in a condition to go through her household duties, and felt her arm becoming every day stronger. There was no sinking of the shoulder, and, except when closely examined, no appearance of disfigurement.

CANNON-BALL WOUND: SLOUGHING: HÆMORRHAGE FROM THE EXTERNAL CAROTID: LIGATURE OF THE VESSEL: RECOVERY.

Dr. J. M. Steiner, Assistant Surgeon U. S. Army, publishes the following interesting case.

"Three or four days after the battle of Cerro Gordo, I volunteered my services to the Surgeon General to return to Plan del Rio, whither the most of our wounded had been conveyed after the action. Among others placed under my charge by the Senior Medical Officer, Dr. Cuyler, was an Illinois volunteer by the name of Todd, with the worst-looking wound I have ever beheld.

"This man was struck by a cannon ball, which carried away the left half of the inferior maxillary bone, stripping the soft parts from the superior maxillary as high up as the malar bone, tearing away the soft parts from the left side of the neck to within an inch and a half of the clavicle, laying bare the transverse processes of the second and third cervical vertebræ, and exposing the external carotid with the most of its branches. The wound, when I first saw it, was in a miserable condition, covered with fragments of the lacerated tissues, already gangrenous, and pouring forth an ill-conditioned sanies, the smell of which was intolerable. The constitutional symptoms corresponded with the condition of the wound. The pulse was small and corded, and exceedingly frequent, the tongue furred and dry, the skin hot, and harsh to the touch, and the bowels torpid. I dissected away the partially

loosened sloughs which covered the wound, and applied an emollient poultice. For the relief of the constitutional disturbance, a draught of salts was given, which having acted briskly upon the bowels, abated the fever, and the patient expressed himself much relieved. On the following day, the appearance of the wound was much improved, the pus assumed a more healthy character, and the man's spirits began to revive. The third day after my arrival, he was conducted on a litter to the general hospital at Jalapa, where I continued in charge of him, at the special request of Dr. Hill, then in charge of the volunteer division of the hospital. The treatment at Jalapa consisted exclusively in the application of the olive oil dressing, with proper attention to the regulation of the bowels, and the mild exhibition of opiates at night. Under this course he improved daily, the wound commenced granulating, and by the first of June he had nearly recovered, a small fistulous orifice communicating with the mouth alone remaining unclosed.

"As a different arraugement was made at this time by the Senior Surgeon in the assignment of the wards, Todd fell into the hands of another surgeon, and I saw no more of him for some time. At the end of two weeks, I think on the 15th of June, I was placed in charge of the sick and wounded, who were, by the order of the General-in-Chief, to remain at Jalapa, as they were deemed too unwell to be removed to Perote, where all, whose lives would not be manifestly endangered by the transportation, were being carried. To my surprise I found Todd among the number left under my charge. Upon an examination of his wound, I found it in a worse condition than when I first saw him at Plan del Rio. The neck was enormously swollen, the whole of the newly formed granulations in a sloughing condition, and a dirty, ill-conditioned pus running abundantly from the wound. The constitutional symptoms were similar to those at Plan del Rio. I applied to the wound a large emollient poultice, and administered 10 grs. of blue pill, followed in a few hours by a draught of the sulphate of magnesia. The next morning I thought it desirable to repeat the poultice, with the view of cleansing the wound and lessening the inflammation.

"On the afternoon of the same day,—the 17th—I was hastily informed by the steward, while at my quarters, about a hundred yards distant from the hospital, that Todd was bleeding to death. Upon arriving in the ward a few moments after, I found the poor fellow bathed in blood. Stripping the poultice from his neck, I tore away with my hand the gangrenous flesh which concealed the artery, when I was blinded by the gush of blood from the external carotid, which was the vessel ruptured. Pressing the right hand with all my force below the part ruptured, I succeeded in arresting the hemorrhage. The poor fellow was so much exhausted that I was obliged to turn him almost upon his head, in order that his brain might have the benefit of what little blood yet remained in his body. Having with care substituted the strong hand of an attendant in lieu of my own, in controlling the hæmorrhage, I made an incision from the left sterno-clavicular articulation, extending obliquely upwards and backwards two inches in length, with a view of ligating the carotid artery. The neck was so enormously enlarged, and the tissues so much altered, that I encountered more difficulty in effecting my object than I expected. I encountered the vessel, however, and having carefully separated it from the vein and nerve, succeeded without trouble in ligating it. Upon measurement, I found the depth of the incision an inch and three-quarters. For two days he was kept regularly on wine, and boiled milk and toast. Two days after, all the sick were removed to Perote. The few days I was in this place Todd rapidly improved. I left Perote ten days after the performance of the operation, for the city of Puebla, but have learned since, through several sources, that the man is entirely well, and only waiting an opportunity to leave for home." [*Medical Examiner* (Philadelphia), January 1849, p. 14.]

OBSTETRICS.

NEW METHOD OF TREATING STERILITY, BY THE REMOVAL OF OBSTRUCTIONS OF THE FALLOPIAN TUBES.[1] BY TYLER SMITH, M.D., LOND.

Since Dr. Tilt's valuable paper in our present Number[2] was printed off, the following Essay, by Dr. Tyler Smith, has appeared in the *Lancet*. It is of sufficient importance to justify our reprinting it without any curtailment:—the more especially as we have had to-day (26th May) an opportunity of seeing Dr. Smith introduce, with ease and rapidity, a fine whalebone bougie into the Fallopian tube of an unopened uterus. By means of a hollow silver tube, suitably curved at the distal end, the point of the whalebone instrument was conveyed to the cornu of the uterus, and was then made to pass into the tube.

"In a lecture published in the *Lancet* of September 16, 1848, (vol. ii, p. 309,) I refer to the variety of Sterility dependent on the state of the Fallopian tubes, and I observe that 'I have recently devised and performed an operation connected with these tubes, for the removal of Sterility.' My proposal to explore the Fallopian tubes was somewhat prematurely criticized in the *British and Foreign Medico-Chirurgical Review* for January 1849, and this criticism, by a writer whom I nevertheless hold in the highest respect, it was, which mainly induced me to delay the publication of a paper I had prepared, describing the operation, and the instruments used in its performance. In the mean time, I continued to mature the operation, and made no secret of the matter to any of my friends. But the subject has since been referred to incidentally, in such a way that I feel I ought not longer to delay placing it before the profession. In a paper on Sterility the result of Ovarian Disorder, read by Dr. Tilt, at the Westminster Medical Society, at the meeting of April 28, the question of deobstructing the Fallopian tubes was mooted. The following is the report of a portion of Dr. Tilt's paper, at the reading of which I regret I was not present:—'This imperfection (Sterility) was the result (among other causes) of lesions in the tube destined to convey the ovula to their uterine abode. He likewise stated that Sterility was sometimes produced by the uterine extremities being blocked up by a glutinous deposit, and asked, Whether there was any possibility of doing for these organs what Mackintosh and Simpson have done in similar cases of temporary occlusion of the neck of the womb?' I perfectly agree with Dr. Tilt respecting the existence of this form of Sterility, and it will be seen that I had by anticipation answered his question in the affirmative, though I presume that of this Dr. Tilt had no knowledge whatever.

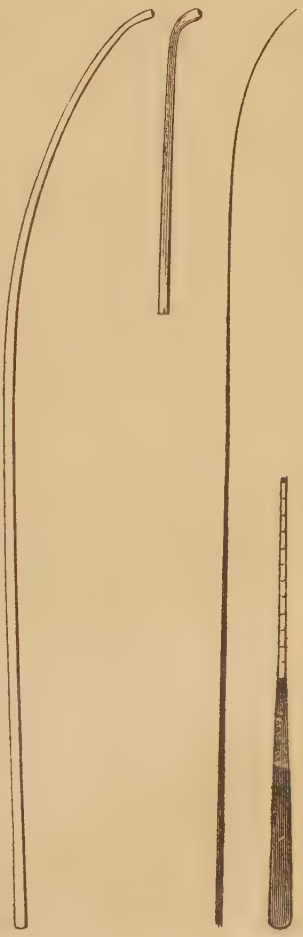
"Perhaps I cannot do better than state the way in which I was led to entertain the practicability of deobstructing the Fallopian tubes. In January 1847, I was consulted by a lady who had been married twelve years, to a husband in good health, without having borne any children. As a large property and a title depended upon her having offspring, her presumed Sterility was a source of great anxiety; producing more conjugal unhappiness and dissension than can well be described. The lady was in good health, the catamenia were regular, and there was no uterine or ovarian disorder sufficient to prevent impregnation. This I ascertained by the most careful examination. It occurred to me, in treating this case, as it must have occurred to many others under similar circumstances, that some Fallopian impediment to the descent of the ovula, or the ascent of the spermatic particles, might

[1] It is now nine months since I performed the first operation on the Fallopian tubes. I mention this fact at the commencement, to show that I have not been in rash haste to publish upon the matter. At every step I have taken respecting it, I have endeavoured to exercise the utmost caution.

[2] Vide Dr. Tilt's paper, p. 510.

exist, as the cause of the infecundity. As the case was important, I took the opinions of two or three eminent obstetric physicians, as to the possibility and safety of exploring the tubes, but I met with so much discouragement that I did not then attempt it. If I listened to the same authorities, now that I have surmounted the difficulty, I should still desist from publishing any account of the operation; but it seems to me right, and a duty, that I should do so. The lady I have referred to, left London after undergoing the ordinary treatment without any subsequent success. From this time, however, I began to entertain the possibility of reaching the Fallopian tubes, so as to render them objects of curative treatment.

"Pursuing my inquiries, I learnt that one of our most distinguished obstetric physicians, and also an eminent surgeon of the metropolis, had separately tried to devise an operation for the deobstruction of these tubes. The first, by passing a small bougie in at the os uteri, and attempting in this way to direct it towards the mouth of the tube; the second, by proposing to obtain a sight of the uterine extremity of the tube by the aid of my friend Mr. Avery's very ingenious lamp and reflecting tubes. I believe both attempts were quite unsuccessful.



"There is an operation of Gairal, a French surgeon, a modification of catheterism of the Eustachian tube, consisting of the introduction of a fine whalebone bougie through the Eustachian tube into the cavity of the tympanum, which I had often performed, and which it seemed to me might be made applicable to the Fallopian tubes. In this operation, the Eustachian catheter is passed to the guttural extremity of the Eustachian canal, and then a whalebone bougie, quite flexible from its fineness, is passed through the catheter and the Eustachian tube into the tympanum. When the bougie has been passed, it can be seen through the semi-transparent membrana tympani. Gairal's operation was used to dislodge thickened mucus from the tube, to dilate contractions, or to stimulate the mucous membrane in unhealthy states of the tube.

"The following is the manner, accompanied by all the cautions I could devise, in which I determined the practicability of the Fallopian operation. I procured the uterus and appendages from a subject who had never conceived, and having first divided the uterus into two symmetrical halves, I moulded a small tube of flexible silver into such a shape, that when passed through the os uteri, it pointed accurately to the uterine mouth of the Fallopian tube on one side. It was necessary to arrange the tube so that it should pass through the os and cervix uteri in the undivided organ, and not

only point towards the Fallopian angle of the uterus, but also direct a fine fibre passed into the silver tube, in the line of the Fallopian canal. The proper shape was obtained by a short abrupt curve, at the extremity of the catheter. After this I ascertained, by trying the tube thus bent, upon a perfect uterus, that it could be passed with ease into the uterine cavity, directed towards the orifice of the Fallopian tube, and withdrawn again from the uterus. I next ascertained the calibre of the canal of the Fallopian tube, by using fine wires of different sizes; and having prepared a whalebone bougie of the proper fineness, I found it could be directed with the utmost accuracy towards and into the Fallopian tube. The Fallopian angle of the uterine cavity is so acute, and the internal surface so smooth and dense in this situation, that it is almost impossible for the whalebone fibre to miss the tube. This readiness of the passage of the bougie is favoured by the anatomical shape of the uterine cavity. In the middle of the triangular cavity of the upper part of the uterus, the anterior and posterior walls project so as to touch, or nearly to touch, each other; but, from the orifice of the cervix to the Fallopian tubes on each side there are two lateral sulci, or grooves; and there is also another groove, extending at the fundus uteri from one Fallopian tube to the other. This triangular sulcus thus surrounds the promontories in the anterior and posterior uterine walls. The groove at the fundus is very useful in directing the beak of the catheter to the Fallopian orifice. Of course it is necessary to have two silver tubes or catheters, one for the left, the other for the right Fallopian canal.

"After making these preparatory observations on the uterus and Fallopian tubes, when removed from the body, it became necessary to alter the apparatus so as to suit the living subject. The only modification necessary was to adapt the tube or catheter to the large curve described by the vagina and the uterus. For this purpose I had an instrument made by Mr. Thompson, of Windmill-street, having the curve of the uterine sound to adapt it to the uterus and vagina, and an additional lateral curve at the extremity, turning towards the Fallopian tube. When completed, this instrument was not so large as the uterine sound, or the intra-uterine pessary. The whole of the uterine length of the catheter was graduated so as to measure the depth of the uterine cavity. I also had a fine whalebone bougie, very flexible at the extremity, and graduated at the handle like Gairal's bougie, in order to show the depth to which the extremity enters the Fallopian tube. The important point, it will be seen, was that of obtaining a directing-tube, accommodating itself to all the different curves of the sexual canal.

"Two of the preceding wood-cuts give front and side views of the Fallopian catheter, reduced in size,—the first showing the utero-vaginal curve, the second, the Fallopian curve of the instrument. The other figures represent the whalebone bougie, also reduced.

"An opportunity soon presented itself, and I attempted the operation on the living subject. The patient was about twenty-five years of age, the uterus had never been impregnated, and was in the normal situation. I mention this, lest it should be supposed to have been a case of prolapsus, in which the operation would of course be more easy and simple. Having lodged the os uteri in one of Mr. Fergusson's specula, I first passed the uterine sound to the fundus uteri, so as to assure myself that no uterine impediment existed; after this, I passed in the Fallopian catheter very readily, and directed it towards the left Fallopian orifice. Steadying the catheter in this position with the left hand, I introduced the whalebone fibre through the catheter, and into the Fallopian tube, for about an inch and a half, with the greatest ease,—indeed I was surprised at the ease with which it passed; but this I attributed to the great care I had taken in maturing my plan beforehand. I withdrew and re-introduced the bougie several times, without producing any pain or uneasiness whatever. In fact, the only difficulty met with, was in passing the sound through the constricted portion of the cervix uteri.

"In the operation upon the Fallopian tube, the patient was not at all conscious of any sensation of any kind, more than from the ordinary specular examination. I found it easier of performance upon the living than the dead subject; or rather, I was able to pass a larger bougie than would have entered the Fallopian tube of the preparation. From my subsequent observations, I have no doubt whatever that the calibre of the tube is greater in the living than in the dead, owing to the contraction which occurs in the tissues of the latter. I have now performed the operation repeatedly, in the same manner, without pain or difficulty, or any subsequent inconvenience whatever, as far as the mouths of the tubes are concerned. When the tubes are not imperforate, they can, with due care, be readily operated upon, if the sound can be passed to the fundus uteri. Of course it is necessary that the operator shall be familiar with the use of the speculum, so as to command the os uteri with ease; and the uterus must not be materially displaced, otherwise the utero-vaginal curve of the instrument will not be adapted to the curve of the organs themselves. Where any difficulty is experienced, it will not be at the Fallopian tubes themselves, but before reaching these organs. This is in consequence of the very different state of the vagina and the os and cervix uteri in different women. The os uteri and the uterine cavity should be in a healthy state at the time of the operation.

"One word as to any supposable ill results from the new operation. I have not observed any bad symptom whatever which could fairly be attributed to it. Nor are any, as I believe, to be expected, in careful hands, if we throw aside the nameless fear which always attaches to any attempt to deal with organs hitherto sacred from the touch of the medical practitioner. As regards the uterus, the operation is less formidable than the passage of the full-sized uterine sound; the dilatation of the os uteri by the dilators in common use among obstetricians; the introduction of medicated bougies into the cavity of the uterus, and many other applications of obstetric surgery to this organ. As regards the Fallopian tube, though the bougie is calculated to remove obstructions, it is too flexible to injure the very dense structure of the uterine extremity of the tube. Any irritation it can produce, if used with caution, is inconsiderable, when compared with the monthly irritation to which these tubes are subject physiologically. As regards the peritonæum, there can be no danger whatever of peritonitis, as it is not proposed to approach the fimbriated extremities of the tubes, where the lining membrane becomes continuous with the peritonæum. It is in the narrow portion of the oviducal canals, near the uterus, where the removable obstructions occur. But the best answer to hypothetical objections of this kind which are sure to be raised is, that in practice no peritonæal disturbance has ever followed the operation. At the same time, I would urge great caution in the performance of the operation, particularly by those who are not accustomed to the use of the speculum and the actual treatment of uterine disorders.

"On considering the subject, it appears to me extraordinary that the Fallopian tubes have not been brought within the province of remedial manipulation before. It is the characteristic of modern surgery to penetrate more and more into the recesses of the body. We have operations upon the Stenonian ducts, upon the lachrymal ducts, and upon the Eustachian tubes, quite as delicate as that which I have now described upon the Fallopian tubes. Surgery has long since applied itself successfully to the urethra, the rectum, the trachea, and the œsophagus. I can only account for the neglect of the Fallopian tubes, because of their depth from the surface; but, by the speculum, the os uteri is, in effect, brought to the surface of the body; and the distance from the os uteri to the mouth of the tubes is short, and without any material impediment.

"In a future communication, I propose to give some further particulars respecting the operation, and its application in practice, but particularly with reference to the removal of Sterility by deobstructing the Fallopian canals a

their narrowest and uterine portion. I do not mean to assert that obstruction or occlusion of the Fallopian tubes is the most prevalent cause of Sterility, but it must undoubtedly be a common cause of this affection. No one conversant with the anatomy of the generative canal can doubt that a small plug of inspissated mucus or coagulum may occasion barrenness. I believe the operation I have described ought, where there is no special contraindication or difficulty, to be cautiously performed, in all cases where there is the desire of offspring, and where the Sterility is not remediable by ordinary measures." (*Lancet*, 19*th May*, 1849.)

SUCCESSION OF MONSTROUS BIRTHS OCCURRING IN THE SAME FEMALE.

The following is an extract of a letter to Professor DUNGLISON, from Dr. J. MARTIN, dated Philadelphia, December 4th, 1848.

"I will cite cases of monstrosity occurring in a lady with whom I have been acquainted for about fourteen years. Previous to that time, she gave birth to two well-formed, and well-featured children. I attended her in the first case of monstrosity. At the period of my earliest acquaintance with her, she moved in the middle walks of society, and had enjoyed good health up to that time. She was well developed in figure, and gave birth to a child perfectly formed in every respect, with the exception of its head and face. The eyes were placed at the top of the forehead, and all the superior and posterior parts of the head were deficient, the corresponding bones of the cranium being wanting, and the opening fringed round with something very like liver. Her labour was attended with no difficulty; but the liquor amnii was very abundant, and the child was still-born. She had a speedy recovery. In about eighteen months after this, she gave birth to another child which was properly developed as to face and head, but the flexor muscles of the legs and arms were in fault: I could not straighten its legs, arms, fingers, or toes, owing to the flexors being too short. Her labour, this time, was not so easy, in consequence of the arms being flexed on the breast, and the hands below the chin; yet it was not attended with much difficulty, and the liquor amnii was again abundant. The next two confinements were similar to the first I have detailed, in every respect, the monstrosity being the same; from both she had a speedy recovery. At the next (in the winter of 1843–4), I was not present, being in attendance on the medical lectures in Philadelphia, but I understood that the labour was not accompanied with more severity than is common to women. The child was defective on the top of the head, and the liver-like growth was there as in the other births. In 1846 she was confined again, and I was summoned to watch over her difficulties during her labour. She was in great hope that she would have a perfect child, being led to this conclusion by the strong movements of the child *in utero*. During the labour the os tincæ dilated rather reluctantly; but when dilatation did occur and the membranes were ruptured, a great discharge of liquor amnii took place, and I was enabled to discover that the head was defective while it was still at the superior strait. The deficiency was the same as in the other instances, but it was born alive and lived about three hours, and moved and made considerable muscular exertion. There was hemorrhage from the liver-like production on the top of the head. This child assumed a cerulean hue, becoming more livid from the moment of its birth till its death. The lady recovered rapidly. The last misfortune was in 1847, when she had a miscarriage; the embryo was about two inches in length, and the defect at the top of the head could be very readily discovered. Here then, are five cases of mature labour, the products of which were all defective at the top of the cranium, one carried to the full term and defective in the flexor muscles, and one abortion, in which the embryo exhibited the same defect at the upper portion of the cranium, and all occurring in the same female, apparently in the enjoyment of perfect health." [*Medical Examiner*, January 1849, p. 24.]

DR. J. Y. SIMPSON ON THE DISCOVERY OF THE AIR-TRACTOR.

Dr. Simpson has printed the following letter in the *Medical Gazette*, from which it appears that Dr. Mitchell's accusation (p. 386) was unfounded :—

Sir,—It certainly was neither my wish nor intention to join in the controversy relative to the Air-tractor, which you have lately given in the pages of the *Gazette*. But as you have thought fit to write editorially on the matter, in your last number ; and as your own remarks, and those of your correspondents, are, I think, calculated to do me unintentional injustice, I hope you will excuse my troubling you with one or two observations merely in my own personal defence.

1. In the *Gazette* for March 23rd, you published a short anonymous letter containing the following accusation : "Dr. Simpson, of Edinburgh, lays claim to the merit of discovering the applicability of atmospheric pressure in aid of delivery." Now this accusation is totally groundless, because it is totally untrue. I never laid claim to any such merit. On the contrary, I have always given it to whom it is due, viz. to Dr. Arnott. In the first published notice of the subject, I quoted in full Dr. Arnott's own words, in which he suggests the principles of the instrument. Could I do more ? Let me add, that Dr. Arnott first published the suggestion in 1827 ; and at that time the Editor of the *Medical Gazette* both derided the proposition and its originality.[1]

2. Dr. Mitchell sets out in the first sentence of his first letter to me, as given in your pages, with stating "I was rather surprised to find that you had not acknowledged me (Dr. Mitchell) as the discoverer of the application of the principle in such instrument." I have already stated that I gave the merit where I deemed the merit due, viz., to Dr. Arnott ; and I was not, till the last month, in the slightest degree aware that Dr. Mitchell had in any way attended to the subject, though I knew that other gentlemen had made attempts to reduce Dr. Arnott's suggestion to practice,[2]—but without success. I feel certain that if Dr. Mitchell will only get an instrument constructed on *his* proposed plan (as given in the sketches he has sent me in his first letter), he will find, I believe, that it is powerless and useless, and that it is not applicable in practice.

Let me add, that I am sure that no man can honestly accuse me, on any occasion, of ever failing, either in lecturing or in writing, to do every possible justice in my power to other investigators, and in distributing *suum cuique*, as far as my knowledge went.

3. In the first published notice of the Air-tractor (see Monthly Journal for February, p. 556, and *Medical Gazette* for March 16, p. 480), after mentioning the first case in which it was tried, in December last, I added that I "was not aware that any one had applied practically these obstetric means, before it was employed in the case detailed. But the idea of using such a power had been long ago proposed by a gentleman, for whose works and talents they all entertained the utmost respect,—Dr. Neil Arnott, of London. In his admirable work on Physics, Dr. Arnott alludes to the subject in the following words," &c.

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[1] "We find the old sucking horn of Hildanus brought into use for a most extraordinary purpose, being no less than to draw the child out of the womb. And we find a renewal of that most absurd idea, noticed in Paré's work, and so well ridiculed in Mr. John Bell's Principles of Surgery, of applying a *child's sucker* to raise depressions of the fractured skull. Where is the limit to absurdity ?"—*Medical Gazette*, vol. i, p. 19.

[2] As, for instance, Mr. Paul, one of the best pupils that attended my class during the same year as Dr. Mitchell. Mr. Paul proceeded in the matter much further than Dr. Mitchell. He did not, like Dr. M., merely write and theorise about an instrument, but tried to make one. Dr. Mitchell alludes to my suggesting the investigation, as a fit subject for the ingenuity of my pupils, in 1847-48. When lecturing, I have always been constantly in the habit of directing specially the attention of my pupils from time to time, to subjects open for new inquiry, and tried to stimulate them to think on such matters for themselves, write their theses on them, etc.

In commenting upon this statement, Dr. Mitchell, in the *Gazette* (p. 531), observes,—"He (Dr. Simpson) states that no one before himself, as far as he was aware, had made a practical application of Dr. Arnott's suggestion. The medical public (adds Dr. M.) will now see that he must have been perfectly well aware of its previous application by me." Now I still believe, that up to the time at which the above notice was published by me, no one had applied the aforesaid principle in practice. Dr. Mitchell avers he had applied it previously. If Dr. Mitchell will give the date of any case or cases, in which he applied it, that date would settle the question; and I will at once yield the point if I am wrong.

4. In answer to Dr. Mitchell's first letter, I assured him that in the construction of the Air-tractor I received no hint or suggestion "from his competition exercises, and that I never, as far as I knew, looked at these exercises, as the whole were entrusted to others to decide upon." Allow me to add, that not only did I not read Dr. Mitchell's exercises, or those of the other competitors, (four of whom were rewarded with prizes), but up to the date of his letter to me I never heard, from himself or from any other person, the most distant hint of any ideas of his about the construction of an Air-tractor.

On asking Dr. Duncan, who read the exercises over, he assures me, that that from the time of his looking over the papers till I showed him Dr. Mitchell's letter, he had no remembrance whatever of Dr. Mitchell alluding to the subject; and his observations on it, let me add, must, I think, have been entirely out of place in such exercises, as none of the twelve questions given out referred at all to instrumental delivery. If Dr. Duncan did not attend to such a subject, thus irrelevantly introduced into the exercises, and in which subjects he (Dr. Duncan) was in no respect interested, I do opine he was in no degree to blame, as you seem to think he was.[1]

5. In my note to Dr. Mitchell (see *Gazette*, p. 520) I stated, that "I had thought and talked often of making an Air-tractor, such as I have latterly constructed, long before you were my pupil."

Dr. Mitchell affects to doubt this. I have mentioned Dr. Arnott's suggestion and the subject publicly, at more or less length, every year in lecturing, since I commenced teaching midwifery, ten years ago. It very seldom does happen that a subject of mere medical conversation happens to be a subject of actual record; but in this case it oddly and fortunately enough happens that it is so. In February, 1848, six or eight weeks before Dr. Mitchell's prize exercises were written in my class rooms, Dr. Clay, of Manchester, was called down professionally to Edinburgh, to perform the operation of ovariotomy. In his Obstetric Journal for 1st February last, Dr. Clay, in speaking of the Air-tractor, the utility of which he doubts, observes:—"The instrument is not new to us, having *conversed* with Dr. Simpson a year ago on the subject." (p. 60.)[2] At last, in December, 1848, I was induced to see about the construction of a proper instrument in consequence of witnessing, in the Royal Infirmary here, some trials with the artificial French leech; and at first I thought that an exhausting cylinder and piston, on the same principle, would answer best. In pursuing the investigation after it was once begun, I had to make innumerable trials with, and changes on the instrument, before I obtained a form practically and really useful.

6. Dr. Mitchell purports to report correctly, to you and to your readers,

[1] Of course we do not blame Dr. Duncan for want of memory. As Dr. D. decided against Dr. Mitchell, he must have read his papers; and we confess that it appeared extraordinary to us, that, although no long time had elapsed, he did not recollect that a description of an Air tractor had been given in one of his exercises,—when public attention was so strongly called to the invention by Dr. Simpson. It is evident, however, from Dr. Simpson's statement, that he (Dr. S.) knew nothing of the contents or relative merits of the papers, and that Dr. Duncan had wholly forgotten this reference to the Air-tractor. Editor of *Med. Gaz.*

[2] Dr. Simpson has forwarded to us a letter from Dr. Paterson, by which it appears, that so long back as the year 1836, the subject of the Air-tractor had been discussed by them. Editor of *Med. Gaz.*

various circumstances relative to my statements in lecturing and awarding the prizes, etc.; and founds various conclusions upon his own memory for his own argument. Dr. Mitchell says, that in my lectures I stated that I had "attempted in vain, at the Edinburgh Maternity Hospital, to apply a leather sucker to a child's head." I did not state any thing of the kind, because I never made any such attempt. I never tried till last December to apply the principle in actual practice.

7. Lastly: permit me to observe again, that we are indebted to Dr. Arnott for first suggesting the "applicability of atmospheric pressure in aid of delivery." And if I have any claim to any merit in the matter, it is this,—that after Dr. Arnott's idea had lain dormant and useless for twenty years, I reduced Dr. Arnott's suggestion to actual practice,—was the first to construct a useful and applicable Air-tractor,—the first to use such an instrument in practice,—and the first to point out the cases fit for its use. Further, in the construction of the Air-tractor I was indebted to no one but Dr. Arnott, in even the remotest degree, for any hint or aid whatever. I may be, perhaps, excused for adding, that I have now employed it repeatedly, both in cephalic and pelvic presentations, and both when the head was still high above the brim, and already sunk into the pelvic cavity; and I believe that the construction of the Air-tractor is still very far from being so perfect as it will yet be rendered.—Yours, etc., J. Y. Simpson.

CONGESTIVE DYSMENORRHŒA.

Mr. James Whitehead, Surgeon to the Lying-in Hospital, Manchester, in a paper published in the *Medical Gazette* of April 13, 1849, states the following opinions: "1. There is a form of Dysmenorrhœa, unaccompanied with specific structural change, which differs in its pathology from the two forms hitherto acknowledged" (the membranous and mechanical, described by Dr. Oldham in the *Medical Gazette* for November 1846), "in the absence of those adventitious structures which sometimes escape along with the catamenial current, on the one hand; and on the other, in having the lower uterine canal free from all obstruction or impediment of a mechanical nature,—conditions which characterise these two morbid states respectively. 2. The form of disease which I have attempted to describe, depends on a congested state of the vascular system of the uterus, similar to what obtains in the preliminary stage of metritis; and which condition may be designated, until a more suitable term be suggested, Congestive Dysmenorrhœa. 3. This condition is capable of materially interfering with the function of reproduction; and may be a cause, so long as it exists, of sterility."

LABOUR ACCOMPLISHED THROUGH THE PERINEUM: RECOVERY.

The following is an abridgment of a case recorded by Dr. S. C. Ellis, in the *New York Journal of Medicine* for November 1848, as quoted in the *American Journal of the Medical Sciences*, January 1849.

The patient was thirty years of age, primipara. The head was found pressing on the perineum, which was very tense, and there was little or no detension of the os externum vaginæ. Laceration of the perinœum took place, and the child and placenta were delivered through the opening. The laceration began about an inch from the anus; at first it was transverse, then run on each side the vulva, making a ragged, irregular wound; so that at least one half of the vulva, including the entire *fourchette*, was hanging loose, and so completely detached, that, in the examination it was turned up, and lay over the pubes. The labour was, to the patient, remarkably easy and quiet; and she had no idea of the manner in which her delivery had been accomplished. The parts were put in position, and a light compress applied over the wound; and in five weeks she had perfectly recovered. Had there been a hymen, Dr. Ellis thinks it would not have been destroyed.

MISCELLANEOUS INTELLIGENCE.

Royal Ophthalmic Hospital. The annual dinner of this Charity took place lately, at the Albion Tavern, and was attended by upwards of seventy gentlemen. The Lord Mayor presided. The toast of the evening—viz., "Prosperity to the Institution"—was coupled with the "Health of Dr. Farre," and was proposed by the Lord Mayor. He stated that, since the establishment of the Charity, upwards of 200,000 patients had been relieved by it, and that the sight of 250 patients, born blind, had been restored through its agency. Dr. Farre, in reply, pointed out that the Hospital had educated, in a thorough knowledge of eye diseases, 1,496 medical gentlemen. It had been the parent and model of many similar institutions all over the world. In India and China, these branch institutions had exercised the most powerful influence on the minds of the natives, and, to a very great extent, in consequence, medical men in the East were becoming the pioneers of civilization. Dr. Farre concluded by proposing the memory of John Cunningham Saunders, the founder of the Charity, whose talents and untimely death he dilated on with affectionate regret. The Secretary, during the evening, announced a list of subscriptions, amounting to more than £700.

Chair of Medicine in University College. Dr. Walshe, Dr. Golding Bird, and Dr. Sibson, are said to be candidates for this vacant Professorship.

Bequests to University College. The following munificent legacies have just been received for the benefit of this institution:—From Thomas Dyson, Esq., of Diss, Norfolk, £100, duty free; Mrs. Kennedy, of Pennsylvania, near Exeter, £500; Charles Filica, Esq., of Park-crescent, £250; and John Curteis, Esq., of Devonshire-place, £500. The £300 bequeathed by Dr. Fellowes, "to be added to the permanent endowment of the hospital," has also been lately paid, without deduction of duty.

Naval Assistant Surgeons. The Royal College of Surgeons of Edinburgh, the Royal College of Physicians of Edinburgh, and the Faculty of Physicians and Surgeons of Glasgow, have done themselves honour by petitioning the Legislature to relieve the naval assistant surgeons from the grievances and indignities to which they are at present subjected. We hope, for the honour of the British navy, that the needed reforms will be speedily accomplished; but, in the mean time, it may be well for our young friends to consider the following questions proposed (in *Lancet* of 26th May) by Dr. Fred. James Brown, of H.M.S. *Howe*:—*Questions for every medical man to propose to himself, before applying for an assistant-surgeoncy in the Royal Navy.* 1. Having studied five years, and received a diploma in surgery and a license to practise medicine, can I submit to the irksomeness of assisting a naval surgeon for twice that period? 2. Granting that I am of a submissive disposition, and capable of passing through this first stage of a surgeon in the royal navy, can I so far humiliate myself as to accept position and treatment similar in every respect to that accorded apprentices on shore? For example:—First, must I dine with the children, and dispense with a private sleeping apartment? Secondly, must I be excluded from the society of visitors, or only introduced with the "young gentlemen"? Thirdly, must I brush my own clothes and my boots, and even make my own bed, unless I pay a servant to do these things for me, who might refuse if he thought proper, as servants are not allowed by the rules? 3. On receiving a commission from the Admiralty to do the duty of a naval surgeon, after eight or ten years' servitude, shall I be able to do that duty as well as on the day I first entered the service? For instance:—First, will the neglect of reading and

study (which naval assistant-surgeons state to be an evil inherent in the present system in her Majesty's ships) cause me not only to retrograde in the science of my profession, but also to lose most of the zeal and energy I now possess? Secondly, shall I not be morally responsible for the deaths of patients which may occur as a consequence of my deteriorated skill in the art of the prevention and cure of disease? On a calm consideration of these questions, am I justified in becoming a candidate for an assistant-surgeoncy in the royal navy?

Westminster Medical Society.—During the session which has just closed, this Society has received an accession of above fifty new members, and has commenced a periodical publication of an authorized version of its Proceedings. Two fasciculi have appeared. About 100 Fellows of the Society dined together at the Thatched House Tavern on the 24th May.

Bequest to found a New Hospital at Edinburgh. Mr. George Chalmers, plumber in Edinburgh, who died in March 1836, bequeathed about £30,000 for the erection and endowment of an hospital for the "Sick and Hurt"; and vested the management of the Charity in the Dean and Faculty of Advocates. The money has been accumulating; and various attempts have been made, from time to time, in order to induce the trustees to devote the funds bequeathed to their care to their proper destination, but without success. We are, however, glad to learn that the Faculty of Advocates have at last seen the propriety of moving in the matter, and that they are taking measures with the view of carrying out the will of Mr. Chalmers.

Scottish Public Health Bill. The Edinburgh Town Council and Commissioners of Police have each sent a deputation to London to watch over this measure. Both bodies seem to hold nearly the same views. The Town Council, at their last meeting, approved of the report of their Committee, who were of opinion, by a majority, that there should be a General Board of Health located in Edinburgh, rather than in London; and suggested that the Board of Supervision, with the addition of the Presidents of the Colleges of Physicians and Surgeons of Edinburgh, could accomplish all the objects contemplated by the institution of a general Board. The Committee were also of opinion, that wherever there was a local Police Act, the powers of the Commissioners under which extended over an entire town, such Commissioners should, by express enactment, be declared the local Board of Health. The Council approved of the report, on the understanding that, unless the suggestions of the Committee were introduced into the bill, the Council opposed it. Would it not be more judicious to allow the Colleges each *to elect* their Presidents or any other Fellows whom they considered better fitted? The *ex-officio* appointment of gentlemen who have many other duties to attend to seldom conduces to the public good.

Night Visits. Within what hours ought physicians and surgeons to consider their visits as "Night Visits," and charge for them accordingly? This question has recently been submitted to, and solved by, a legal tribunal in Belgium. After hearing various witnesses, it was decided, that *all visits made between* 9 P.M. *and* 6 A.M. *ought to be regarded as night visits.* This decision seems to be just and reasonable, both to patients and medical men.

Clot Bey, the famous French physician, so long in Egypt, has been dismissed by Abbas Pasha with a pension, on condition of his living out of Egypt.

APPOINTMENTS.

Royde, George, Esq., elected Honorary Surgeon to the Brighton Dispensary.

Jobert, M. (de Lamballe), appointed Surgeon to the Hôtel-Dieu at Paris, in the place of M. Blandin.

OBITUARY.

Baron, Dr., of the Hôpital des Enfans Malades, has lately died at Paris. He was much esteemed, and extensively consulted in the diseases of children.

Berlie, M., Interne at the Saltpêtrière, Paris, lately, of cholera.

Carioli, Dr., Professor of Clinical Surgery in the University of Pavia, lately.

Duke, John, M.D., at Silverstone, near Towcester, from injury to the brain, produced by a fall, on 19th April, aged 28.

Grundy, William Lord, Esq., Surgeon, at Wolverhampton, of typhus fever, contracted in the pursuit of a profession to which he was ardently attached, on the 18th May, in the 30th year of his age.

Hancock, Thomas, M D., at Lisburn, Ireland, of disease of the heart, on 16th April, aged 66.

Harris, Francis, M.D., at Croydon, on the 5th May, aged 59.

Londe, M., Interne at the Saltpêtrière, lately, of cholera. The obsequies of MM. Londe and Berlie were performed on the 19th May, amid the lamentations of their comrades, by whom they were much esteemed.

Morison, Charles, M.D., Physician to the Forces, at Paris, of cholera, on 4th May. Dr. Morison was long in the Royal 10th Hussars, and served in that regiment during the campaign of General the late Sir John Moore, as also in the campaigns of Field Marshal the Duke of Wellington in the Peninsula.

Pemberton, Dr., of Ballinrobe, Ireland, of cholera, on 16th May.

Roberts, John, Esq., Surgeon, at Bangor, North Wales.

Scard, Edward, Esq., Household Surgeon to his Royal Highness the Duke of Cambridge, at Kew, on 22nd April, aged 41.

Sormani, Dr., of Milan, aged 49. Dr. Sormani was author of the following contributions to medical literature: *On the Causes of Sudden Death*; *On Angina Pectoris*; *On Hydrophobia*; and an unpublished monograph on *Typhus Fever*.

Streeten, R. J. N., M D., at Worcester, of a bronchial affection, after a lengthened illness, on the 10th May. Dr. Streeten was Secretary to the Provincial Medical and Surgical Association, and one of the Editors of the *Provincial Medical and Surgical Journal*; he was also one of the Physicians of the Worcester Dispensary. He was a worthy man, and scrupulously honourable in his social and professional relations. He has bequeathed little of his labours to posterity, save his editorial remarks in the pages of the Journal, which he so ably edited for some years past. He was thrice married.

Thompson, S. S., M.D., Physician to the Belfast District Lunatic Asylum, at Belfast, on 30th April, aged 70.

Turner, Edward P., Esq., Surgeon, at Feckenham, Worcestershire, on 5th May, aged 31.

Warden, W., M.D., Surgeon of her Majesty's Dockyard at Chatham, on 23rd April, aged 72.

West, Joseph John, M.D., at Brighton, on 3rd May, aged 66.

BOOKS RECEIVED.

Bennet (Dr. J. Henry) on Inflammation of the Uterus. 2nd edition. London: 1849. Bryson on Epidemic Fevers of Sierra Leone. London: 1849. Clinical Memorandum Book, published by Highley. London: 1848. Forbes Physician's Holiday. London: 1849. Gilbert on the Extraction of Teeth. London: 1849. Gream on Chloroform in Midwifery. London: 1849. Haddock on Somnolism and Psycheism. London: 1849. Lectures on Medical Missions. Edinburgh: 1849. Merriman on Chloroform in Midwifery. London: 1848. Naval Assistant-Surgeons. London: 1849. Schleiden's Principles of Botany, translated by Lankester. London: 1849.

NOTICES TO CORRESPONDENTS.

Reports of Societies and Academies will, in next Number, be brought up to date.

Contributions sent to us anonymously, are neither inserted, nor acknowledged.

Letters and parcels for the Editors, must be delivered free of every charge, at 28, Upper Gower Street, or 100, St. Martin's Lane, London, or rue de l'Ecole de Médecine, No. 1, Paris; unless in those cases in which a special agreement has been made.

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ORIGINAL COMMUNICATIONS.

THE CLIMACTERIC DISEASE IN WOMEN;

A PAROXYSMAL AFFECTION OCCURRING AT THE DECLINE OF THE CATAMENIA.

By W. TYLER SMITH, M.D. Lond.; Lecturer on Midwifery and the Diseases of Women in the Hunterian School of Medicine.

THE Climacteric Disease has received much attention, since the appearance of the valuable Essay on the subject by Sir Henry Halford, in the fourth volume of the *Transactions* of the College of Physicians. The Climacteric Disorder there described, consists of a sudden decline of the vital or biotic powers in advanced life, and is chiefly met with, in the male sex, from the age of sixty-five and upwards, the female being comparatively exempt from its attacks.

Periodicity is, however, more indelibly marked upon the female than upon the male constitution; and periodic tendencies are as distinctly seen in the diseases, as in the functions, of the female economy. With reference to the sex, the most important climacteric or periodic epoch, is that of the decline of the catamenia. This epoch is generally a time of anxiety, both to patients and professional men; and much care has been bestowed on the study of the access and exacerbations of organic diseases, especially of the uterine system, at this time. Still, it appears to me, *the special disorder* of this period, from which a variety of secondary disorders arise, has never been noticed with sufficient accuracy, either for the purposes of diagnosis or of practice. The Climacteric Disease of this epoch, though of considerable importance, has not been admitted into any nosology.

When we consider the importance of ovulation to the ovaria, and of the catamenial secretion to the uterus, both which functions are carried on in healthy women with unvarying regularity, except during gestation and lactation, for the space of thirty or more years, we cannot wonder that the revolution produced in the economy by their cessation, should be attended by various disordered actions. This death of the reproductive faculty is accompanied, as it were, by struggles, which implicate every organ and every function of the body, but especially the nervous system in all its divisions,—cerebral, spinal, and ganglionic.

This disturbance of the nervous system, though it has escaped methodical observation, takes a certain definite form, without the clear detection of which, its treatment must necessarily be ill-directed and unsatisfactory.

As soon as irregularity in the appearance of the catamenia is observed, certain nervous symptoms, more or less intense, are almost always present. The most common and marked of these are "heats and chills" of the surface of the body; but these heats and chills are not merely disordered sensations,—they are in reality part of a paroxysmal disorder, which a close observation readily makes out. During the whole period of the catamenial decline, whether the process of the arrest of the generative function be spread over a few months, or two or three years, a state of general hyperæsthesia is present. But the paroxysmal disorder I have referred to, is quite distinct from the general hyperæsthetic condition. In the present day, owing to the excessive stimulus of education, the rapid transaction of business, and numerous forms of social excitement, unknown to former times, hyperæsthesia has reached a pitch which has never been hitherto observed. We might, indeed, consider hyperæsthesia as a disease almost as distinct as paralysis of motion and sensation, or spasm. At the catamenial decline, hyperæsthesia is often most distressing.

The simplest form of the paroxysmal attack to which I wish to direct attention, consists of a sudden sensation of cold over the entire surface of the body, which is in a few moments followed by a sense of heat of skin, of an intense character, with the sensation of choking or pharyngismus. These are in turn followed by a cold perspiration, which renders the skin cold and clammy, and sometimes also by a free secretion of urine. At the commencement of the attack, the face is pale, and there is slight head-ache; but when the heat of surface begins, there are flashings before the eyes, ringings in the ears, and frequently nausea, or even vomiting; the face is flushed, there is considerable distention of the veins of the neck and face, and throbbing of the carotids and cerebral arteries. There are, in fact, in many cases, all the symptoms of the *petit mal* in epilepsy. Or the seizure may be compared to a brief ague fit, of which the cold, hot, and sweating stages follow in quick succession. As the condition of the ovaria and the uterus is the cause of this disorder of the nervous system, we might almost be tempted to call it an ovarian or uterine intermittent. The paroxysms are very irregular, and obey no particular times; but they are more frequent at the dates when the catamenia are flowing, either in the scanty or profuse manner so common to the decline of menstruation, or when an ovarian period is passing over, as it frequently does, without any uterine secretion. The brief attack is brought on by taking food or drink, especially stimulating drinks, or by any sudden mental emotion or surprise. The most trivial event, a sudden noise, speaking to a stranger, or waking from sleep, induces an attack. The seizure leaves the patient after a minute or two, bathed in cold perspiration. It is followed also by a sense of great feebleness and languor, much irritability of temper, and some confusion of ideas and memory. Nervous symptoms, during the decline of the catamenia, have often been referred to by writers on the diseases of women, and every practical man must have noticed the heats and chills of this period; but until I did so, no one

had pointed out that these are not vague symptoms, but a succession of definite and peculiar paroxysms.

In the severer paroxysms, all the symptoms I have described are present; and at the height of the attack, there is a brief insensibility or delirium, the paroxysm lasting, altogether, several minutes. The patient sometimes falls down, as if in a slight epileptic or apoplectic seizure. In some of the worst cases I have seen, the attacks have occurred with the greatest violence during sleep, the patient waking in affright at the commencement of the paroxysm. Violent tremors follow, in severe cases, the perspiration in which the attack usually terminates.

As regards the essential nature of these Climacteric Paroxysms, in my work on *Parturition and Obstetrics*, in which I first referred to this affection, I have dwelt at some length on the reciprocal physiological actions which are constantly going on between the ovaria, the mammæ, and the uterus; actions which produce in regular series the successive ovulations occupying the time between puberty and the catamenial decline. When the cessation of the catamenia arrives, the mammæ and the uterus are no longer stimulated by the ovaria to their wonted actions, but the ovaria are not at once reduced to post-menstrual inactivity; before they subside, they produce the uterine disturbance, and the erethism of the nervous system, in which the paroxysmal disorder I have been describing has its rise. Besides the strictly ovarian stimulus to the nervous system, the vascular plethora, resulting from the non-secretion of the catamenia, no doubt increases the nervous excitability; and to this we must probably add the toxæmic effect of retention of the menstrual fluid, as suggested by Dr. Cormack, in his observations on convulsions arising from suppression.[1]

Another very important point, perhaps the most important point, in the pathology of this affection, is the condition of the uterus. At the change of life, this organ is liable to greater congestion than at any other time. This is well known to be the date of the origin of many of the most dangerous and fatal of the structural diseases of the uterus. When there is not irregular menorrhagia, there is constantly recurring uterine congestion, caused by the irregular and inefficient ovarian stimulus. In all cases, in which the paroxysmal disorder is severe, the uterus is found upon examination to be turgid and swollen. In fact, if we refer the general conditions, and the paroxysmal disorder, to any one cause, it must be to the uterine congestion, caused by the special arrest of the ordinary uterine functions, and the irregular ovarian stimulus, which continues, but ineffectually, to goad the uterus to action. This view of the pathology of the affection, leads to the most rational and successful method of treatment. It is curious that some other irritations of the pelvic region will produce paroxysmal attacks similar to ague. This has been frequently noticed in cases of irritation and suppuration in the perinæal region.

Symptoms resembling in many respects those of the Climacteric paroxysm, sometimes occur in nervous patients suffering from suppression of the catamenia, or from suppression alternating with menorrhagia; and particularly in those cases of irregularity of the catamenial function which

[1] London Journal of Medicine, June 1849, p. 531.

occur in widows or in married women living separate from their husbands. But the genuine attack seldom occurs except at the decline of menstruation. Whenever widowhood or separation takes place at the change of life, all the distressing symptoms, and the ovario-uterine excitement, are considerably aggravated.

The proper recognition of this paroxysmal affection of the Climacteric is of great importance in practice. The paroxysm itself forms the basis of many of the severe affections of the nervous system; while the states of the uterus and ovaria, which produce it, give rise in turn to many of the organic diseases which follow the cessation of menstruation. The Climacteric paroxysm is the first distinct step in the nervous pathology of this important period. This affection is intimately connected with Hysteria, Epilepsy, Paralysis, Apoplexy, and even Mania, and may terminate in any one of these maladies. It is only by a due recognition and judicious treatment of the preliminary disorder, that these grave complications can be successfully met or prevented.

I proceed to refer briefly to the most prominent complications arising out of the Climacteric Disease.

Climacteric Hysteria. I have seen the paroxysm pass into a violent hysterical attack, all the visceral spasmodic actions which mark the hysteric fit being present,—such, for instance, as painful and spasmodic action of the cardia, or cardiasmus; painful contractions of the pharynx, or pharyngismus; tenesmus of the rectum and bladder, etc. In hysterical subjects, the disorder is always aggravated by the decline of menstruation; though, after that period has passed, the hysterical tendency diminishes. The Climacteric paroxysm may produce, besides the hysteric fit, a variety of anomalous hysterical symptoms, such as fainting, insensibility, violent weeping, etc.

Climacteric Epilepsy. I have also known the paroxysms of the Climacteric Disease become more and more severe, the insensibility more prolonged, and attended by convulsions, until, in fact, genuine epilepsy has been produced. I have seen several cases of epilepsy in which the disease appeared for the first time during the decline of the catamenia, and grew out of the peculiar paroxysmal disorder I have attempted to describe. The Climacteric paroxysm itself disappears when the constitution is established after the completion of the catamenial change; but unfortunately, when epilepsy becomes grafted upon it, the more serious disease remains after the change of life has passed.

Climacteric Apoplexy. I have known cases in which, during the severe Climacteric paroxysm, the patients have had an attack of hemiplegia or apoplexy. Cases of sudden death, or paralysis occurring at the change of life, are, I have little doubt, to be attributed to these paroxysms. The paroxysm itself produced the cerebral distension, and the danger of this is increased by the greater fulness of the circulation which generally exists at this epoch. In some constitutions, a very slight paroxysmal seizure may produce disastrous results.

Climacteric Mania. Insanity frequently occurs at the change of constitution. I have no doubt that it is often owing to the climacteric paroxysms. Each paroxysm is a distinct shock to the brain, leaving behind it peevishness, irritability of temper, and eccentricity. While writing these pages, I was consulted by a lady, aged 45, who has suffered for two or three years from what women invariably term heats and

chills. Her disposition towards her husband and family has completely altered. She is morose and passionate on the slightest provocation, yet having a full sense of her improper explosions of temper, which at times she deplores most earnestly. Her nervousness is very great; she cannot listen to the same noises, or occupy herself with the same needle-work long together, without a frantic feeling of delirium and loss of self-control. In this case the paroxysmal disorder is the evident cause of her mental distress. When the attack is severe, there is, as I have said, transient delirium at each visitation. When the attacks are frequent, great cerebral irritability is induced, and the patient may become maniacal. In considering the relations of epilepsy, paralysis, apoplexy, and mania, to the Climacteric disorder, we must not judge of the results by the shortness of the Climacteric seizure. We know that in other states of the constitution, a momentary paroxysm of no great severity may produce the most serious cerebral disease.

In a note to his chapter, on the "Disorders attendant on the Decline of Menstruation," Dr. Ashwell refers to the insanity of this period, and his observations are so interesting with reference to this subject, that I quote them entire. He says:—"I have lately attended several cases of decided insanity, consequent on the use of wine and spirits during the period of the catamenial decline. In one, which I saw in consultation with Dr. Holland, when these stimulants had been employed with the hope that they would relieve the languor and depression, the affection assumed all the characters of violent mania, eventually, however, subsiding into what was feared would be incurable madness. Nevertheless, the patient entirely recovered in two years: the efficient remedy being frequent leechings of the cervix uteri, moderate purgatives, nutritious diet with malt liquor and light wines, and extreme tranquillity in the country. In two other but less severe examples, similar means have ended in a cure. I cannot forbear to mention how superior have been, in these cases, the beneficial and almost unvarying immediate good effects of uterine bleeding, over every other kind of depletion."[1]

Now I have no doubt whatever,—and I believe Dr. Ashwell will join with me in the opinion,—that such cases are examples of the affection I have been describing, aggravated by the improper use of stimulating drinks. I have observed, that in the intervals of the slight attacks, there is great mental depression, and a craving for mental and physical stimulus, indulgence in which of course only aggravates the malady. Cases of mania having this origin ought to be placed in a different category from insanity from ordinary causes, as the subjects of it, under judicious treatment, generally recover; and I have no doubt that many such cases might be prevented from proceeding to more serious disease, by the detection and treatment of the Climacteric paroxysm, as the first link in the pathological chain.

The Treatment of the Climacteric Disorder should have reference chiefly to—

I. The Cerebral Symptoms;
II. The Ovario-Uterine Disorder;
III. The General Hyperæsthesia.

[1] Practical Treatise on Diseases Peculiar to Women, by Samuel Ashwell, M.D. p. 202.

I. The Cerebral Symptoms. Our first care should be to prevent the paroxysms as far as possible. The peculiar cerebral attack being brought on or exaggerated, in the special condition of the nervous system at this time, by any local irritation, great attention should be bestowed upon the stomach, bowels, and uterus respectively. In its exaggeration by local causes of irritation, the disorder very closely resembles epilepsy. The diet should be regulated, the bowels kept free from irritation and constipation, and the uterus should be treated after the manner to be referred to, when I come to the special management of this important organ.

All violent mental emotion should be carefully avoided. Great watchfulness should be observed on this point, as in consequence of the condition of the ovaria and the uterus, and the nervous synergies excited by these organs, the mind is excessively prone to irritability. Sources of mental irritation should be prevented as much as possible. Stimulating diet and stimulating drinks should be used only with the utmost caution. At this period, women should be treated with great consideration by those in intimate relation with them. There is no time, not even during pregnancy, when greater mildness and forbearance towards them is necessary. The sexual stimulus should be used with moderation, as either excessive intercourse, or ungratified desires, are equally provocative of the general excitability and the cerebral paroxysms. Many women, during the change of life,—even those of the most irreproachable morals and conduct,—are subject to attacks of ovario-uterine excitement approaching to nymphomania. This is a consideration of the gravest importance; for, without doubt, some of the errors committed by women at this time, are more the result of bodily disease than of moral failing; and, as such, might be prevented by judicious treatment. Every care should be taken to control the mental emotions, and to soothe the physical causes of their excitement. It should ever be borne in mind, that, at this epoch, all the emotions connected with sex are undergoing a great revolution, and that before their subsidence into the calm of post-menstrual life, sudden ebullitions are very prone to occur.

If the cerebral disorder be treated as an independent affection, it will often seem, from its violence, to require active depletory treatment. This would be a mistake, and would be likely to produce great mischief. Patients may be rendered anæmic, without curing the disorder; in fact, it will often increase in severity under active depletion. Still, it becomes necessary in some cases, where the headache is severe, or when the delirium or insensibility are very marked, to apply leeches to the temples, or to employ cupping to the nape of the neck, from time to time. Otherwise, the cerebral congestion, inseparable from the paroxysmal attacks, may produce serious lesions of the nervous centres. The state of the brain should be especially watched during the true catamenial dates, or at those irregular times when there are indications of a catamenial crisis, such as pain in the back, thighs, and hypogastrium, but without the flow of any uterine secretion. It is at these times that the sudden cerebral mischief is most likely to happen.

I do not enter into the treatment of the epileptic, hysteric, paralytic, and apoplectic seizures, which arise out of the Climacteric paroxysm, my present purpose being chiefly to point out the prevention of these serious affections.

Regulation of sleep is of considerable consequence. Early hours and early rising should be recommended. Heavy and prolonged sleep, particularly in the morning, exerts a marked influence in increasing the severity and frequency of the paroxysms. The indisposition to exertion should be conquered as far as possible. At no time of the female constitution is exercise so important as at this. Patients should be as much as possible in the open air. Indeed, in the erethism of the Climacteric, the open air is almost as important as in the *erethismus mercurialis.*

II. The Ovario-Uterine Disorder. The treatment of the ovaria and uterus is the most important point, in the management of the female Climacteric. The cerebral symptoms are only the *results*, while the conditions of the sexual organs are the *causes* of the more remote maladies. Any disorder of the uterus or ovaria, beyond that actually incident to the catamenial change, should be carefully treated. Irritation or abrasion of the os uteri, or displacement of the womb, or congestive enlargement of the organ, increases the severity of the constitutional symptoms. The most natural and effective remedy for all the uterine disturbances of this period, is moderate depletion from the *labia uteri.* The blood may be drawn by incisions into the os uteri, just as in scarification of the gums. I have often used a gum-lancet with great good effect. Or if the depletion be required to be more considerable, three or four leeches should be applied, by the aid of the speculum, to the os uteri. Leeches draw blood more suddenly from the vascular os uteri than from any other part of the body to which they are commonly applied, and often produce prompt and immense relief,—all the relief, in fact, of the catamenial secretion, without any of its inconveniences. The suddenness with which leeches applied to this part fill themselves, considerably increases the good effects of their application, and for some hours after their removal there is an oozing of blood from the leech-bites. Even in cases where hæmorrhagic symptoms accompany the change of life, the application of leeches before the coming on of each uterine flow diminishes the menorrhagia, by diminishing the uterine congestion. Occasional local depletion, besides its importance to the Climacteric Disorder, tends more than anything else which can be devised, to prevent the structural diseases which frequently set in or exacerbate at this epoch. The effects of uterine depletion in mitigating the most distressing head-symptoms, is often almost marvellous. This form of depletion ought to be resorted to from time to time, during the change of life, according to the extent of the uterine congestion, in all women who suffer materially from this alteration of constitution. We often see indications of the treatment which is required in sanguineous effusion from vaginal or rectal varices, or from hæmorrhoidal tumours, or even from the stomach and lungs. It is of course still better if the depletion be made from the uterus itself. The effect of uterine depletion is not confined to the uterus, but extends to the other parts of the sexual system, the Fallopian tubes, the ovaria, and even the mammæ. Occasional uterine depletion appears to me of the first consequence, not only as a method of cure, but as a means of preventing organic disease of the uterine organs, and of those organs affected by the uterine

synergies. Many of these disorders, occurring at the change of life, appear to be aberrations of the formative power which, during the whole reproductive era, has expended itself upon ovulation, gestation, and lactation; but which, being now turned from these physiological processes, takes a pathological direction, and runs into disease. Thus, then, local depletion is of still more importance as a palliative and preventive of uterine and other diseases of this period, than as a means of removing more remote symptoms. In treating diseases of the reproductive organs, the special reproductive power inherent in these organs, and manifested even in their diseases, should never be lost sight of.

The local application of cold is an important auxiliary to depletion, at the female Climacteric. Cold hip baths, or douche baths to the loins, cold water injections into the rectum, the injection of cold water, or iced water, or the introduction of small pieces of ice, into the vagina, are the modes in which cold can best be applied. Injections of any other kind than of simple or iced water, generally produce irritation at this period; and sometimes the vagina is so irritable, that even cold water will not be borne. In cases where occasional returns of the catamenia assume a hæmorrhagic or dysmenorrhagic form, warm and anodyne injections, both into the rectum and vagina, are useful, acting as internal fomentations. Warm water and laudanum, or the infusion of poppy-heads with laudanum added, allay uterine pain and excitement. When menorrhagia with relaxation is the prevailing symptom, strong alum baths,[1] in the intervals between the menstrual discharges, tend to repress the profuse uterine secretion, and to remove the relaxation of the uterine and vaginal tissues.

Care must be taken to avoid rectal irritation, as any excitement of the lower bowel is sure to be participated in by the uterus. The bowels should be kept in a lax state by cooling aperients, or enemata; but drastics, and particularly aloes, should be avoided. The habitual use of aloes, either as a purgative or dinner pill, has seemed to me to increase the uterine disturbance of the change of life, when this period arrives. The management of the bowels at this time is often a difficult matter, as the lower bowel participates in the uterine habit, and is at one time irritable and at another confined. To give aloes as an aperient at this period is mischievous; it is still worse to give it as an emmenagogue. All emmenagogue remedies are as distinctly contra-indicated at this epoch as during pregnancy. They are certain to produce mischief. But although the uterine secretion is not to be stimulated, the other important secretions, — hepatic, renal, alvine, and cutaneous,—ought all to be carefully regulated and kept in full play, to compensate for the important secretion which is about to become extinguished.

III. The General Hyperæsthesia. The hyperæsthesia and the peculiar æsthetic paroxysms, to the study of which it has been my main object to draw attention, without doubt depend upon the erethism or excitability of the nervous system, induced by the irritable condition of

[1] I use the formula recommended by Dr. Ashwell, viz. ʒxvi of alum to each gallon of water; the temperature to be at 98°.

the uterine organs, and upon the partial suppression of the catamenial secretion. All the treatment which has been mentioned contributes to the relief of the hyperæsthetic symptoms. I would, however, insist on the importance of regulating the diet of patients undergoing the catamenial change. From the tendency to plethora and *embonpoint* at this period, a light, nutritious, but not full, diet, with little wine, and no malt liquors, should be prescribed. Owing to the distressing sensations common to this time, small quantities of spirits are sometimes ordered, and are always gladly taken by patients. There is often a diseased craving for stimulants at this time, which, in several instances, I have seen pass into a decided habit of spirit drinking. Spirits ought only to be allowed with the greatest caution at this time of the constitution, as their good effect is only temporary, while their permanent influence is most mischievous. I know of nothing equal to moderate doses of sulphuric ether and valerian, for the relief of the depressing hyperæsthesia, and also of the paroxysms, when these are slight. They often act like a charm in soothing the sensations of the surface of the body; and, given as medicine, they beget no such habit as the permission to take small quantities of spirits frequently does. In the Climacteric state of the female constitution, sulphuric ether is a more decided sedative than either morphia, the preparations of opium, or even hyoscyamus. In the height of the hyperæsthesia, an ether-draught will often procure sleep when the brain refuses to be soothed by narcotics. Throughout the whole period of the change, great attention should be paid to the skin. The clothing should be carefully attended to, and, during winter, flannel jackets and drawers should be worn. Tepid bathing, with subsequent friction, are of great use in diminishing the excessive sensibility of the skin.

The time during which women are subject to the Climacteric paroxysm, and the other affections at the decline of the catamenia, varies in different habits. Some women pass through it in a few months; in others, it extends over three, four, or five years, rendering the patient miserable during the whole time. The great majority of women suffer more or less until the cessation be finally accomplished; but there are a few to whom this time of life is a great blessing, giving them greater strength and comfort than they had ever enjoyed during the childbearing epoch. But these cases are the exceptions.

I have thus attempted briefly to sketch the special paroxysmal affection of the Female Climacteric, and its relation to other disordered conditions incident to the change of life. I am well aware how imperfectly this has been done. Indeed, within the limits of a paper, it would be impossible to do it justice, as the subject is one of sufficient importance to exhaust a treatise. I trust, however, I shall have the satisfaction of directing other observers to a very curious malady, and one which certainly, when I first drew attention to it, had not been distinctly recognized or described.

7, Bolton-street, Piccadilly, June 1849.

ON CERTAIN POINTS IN THE DIAGNOSIS OF THE DISEASES OF THE NERVOUS SYSTEM.

By MARSHALL HALL, M.D., F.R.S.

The Diagnosis of the Disease, in the full sense which I have attached to this term in my *Observations and Suggestions*, Series 1, p. 211, is the *first* step which the physician is required to take in his responsible office of the *cure* or care of the sick. Without the Diagnosis, all is darkness. Having first established an accurate Diagnosis, every duty to our patients becomes plain and obvious.

But skill in Diagnosis, in the large sense I attach to this word, implies a sound knowledge of anatomy, physiology, and pathology. All this will be apparent from the following observations, from which it will appear, I think, that however the "practical man"—in other words, the empiric—may exist without a knowledge of physiology, the able diagnostician and physician cannot. Experience, or the habit of visiting the sick, may teach much that it is desirable and even essential to know; but it cannot, without anatomy, physiology, and pathology, or the knowledge of the healthy and morbid actions, enable us to seize each link in the chain of cause and effect in disease, and so "to *know* the disease".

I. Of Hidden Seizures. The first topic which I shall bring before my reader, in illustration of these remarks, is that of *hidden or unobserved seizures.*

I was called, before I had detected the cause of hidden seizures, to a patient affected with protracted delirium, or aberration or confusion of mind, and other symptoms of *arachnitis.* By mild mercurial and aperient remedies, with quiet, a low diet, leeches, a spirit lotion, etc., my patient gradually recovered.

All appeared to be well, when, suddenly, and without assignable cause, except the usual events of business to which he had returned, my patient had a relapse, and now the malady was of tenfold violence: it was furious mania, and long protracted. Again, however, he recovered, though less perfectly.

Again my patient relapsed. But now the malady assumed the form of absence, rather than of excitement of intellect, with imperfect replies to questions, partly from amentia, partly from defective articulation. The case appeared to present the effects of *effusion.* The recovery from this third attack was, however, too prompt and too decisive, to admit of that opinion being retained. I asked the anxious wife of the patient whether there could have been anything resembling a *fit;* and now, for the first time, in answer to this interrogatory, a singular sort of "shuddering", which had occurred immediately previously to this attack, was described.

The patient was slowly but very imperfectly recovering from this third attack, when a decided *epileptic* seizure took place; the eyes, the features, and the head, being convulsively drawn to the right side, followed by augmented symptoms of mental injury, the obvious result of eating too heartily of turbot. In a few days another attack followed, adding

a degree of hemiplegia of the right side of the face and of the right hand to the other symptoms,—a paralysis happily but transient in its duration.

This brief sketch will give a vivid idea of what I mean by the terms "hidden seizures", paroxysmal delirium, paralysis, etc., and spasmo-paralysis.

An epileptoid seizure may take place in the night, at the water-closet, in the city, or elsewhere, unknown to any one. The *effects* of such seizure are referred to other causes,—to other conditions of the nervous centres. The case is called arachnitis, apoplexy, paralysis, mania, etc., according to the prominent symptoms. Who will affirm that he has not made an imperfect diagnosis in such cases? Much careful and thoughtful inquiry, indeed, is required to form a correct opinion. A slight convulsive action, a bitten tongue, an ecchymosed eye-lid, may lead to the detection of a seizure *hidden* hitherto. But before this investigation can be pursued, the mind must be informed and the attention excited. Something slight of this kind may take the speech, the use of the fingers, the vision (in one case, one-half of objects only were seen), etc., for a moment or two, or for a longer time. The affection is, happily, generally transient, as it is paroxysmal. The *seizure* is absolutely *hidden*, except in its *effects*. How much of skilful observation is required before this subject shall be worthily explored!—its hidden character, its paroxysmal form, its form of coma, paralysis, mania, amentia, syncope, sickness, be thoroughly known! This remark leads me to the second topic of this brief practical paper.

II. On the various Forms of Seizures. I had the advantage of attending a most interesting case, four months ago, and again a few days ago, with Mr. Martin, of Grosvenor-street. The former attack was apparently induced by *emotion*. In the latter, no cause could be assigned except the recent keen easterly wind. In it, the head was violently drawn to the right side, the external jugular was distended, the eyes injected and the pupils dilated, and the temporal artery was like a cord, or rather a rope; stupor and hemiplegia were added to these appearances. The right side of the face was slightly agitated by convulsive movements. The next day, a sort of delirium took the place of this stupor. The hemiplegia had (as in the former attack) mostly disappeared; it was paroxysmal and transitory.

It is not my intention to pursue this subject at this time. I must content myself by observing, that the principal *forms* of these seizures are—1, the *Cerebral;* 2, the *Spinal;* 3, the *Cardiac;* 4, the *Stomachic;* that is, inducing cerebral, spinal, cardiac, and stomachic symptoms, variously combined.

Without being unjustly confident in a matter obviously not of a simple character, I would venture to suggest that emotion, or some excitant of reflex actions, is the first cause of these seizures; contractions—morbid and abnormal contraction of the muscles of the neck—an early effect; then compression of the veins in that important region, etc. etc. I propose this subject, as the former one,—as I would every one,—for further and fuller *unbiassed* observation, all *emotion* being excluded. I think, then, that in a certain class of cases, the cerebrum is chiefly affected

with cerebral symptoms; that in another, the spinal centre is chiefly involved with convulsive affections; and that in a third, the medulla oblongata, at the junction of the pneumogastric nerve, is specifically injured with syncope and sickness. This subject for *diagnosis* and for investigation, I commend to the young scientific and physiological physician.

III. On Algo- or Spasmo-Paralysis. It is the object of this part of my paper to call the attention of physicians to the difference between paralysis *with* and *without* pain or spasm, to point out the diagnosis afforded by these facts. But, first, I must speak of the different kinds of pain in these cases. This consists chiefly of the sensation of "pins and needles", as it is termed, and of undue sensitiveness, amounting almost to pain, on touching or gently irritating the cutaneous surface. The *first* diagnosis afforded by the presence of this kind of painful sensation, is that between cerebral and spinal paralysis. In cerebral paralysis, the sensation is generally one of numbness, or of the interposition of some thin substance, as muslin, between the object touched and the fingers. There is rarely any more positive or painful sensation. It is in spinal paralysis that the morbid and painful sensations, which I have described, present themselves. Their absence or presence, therefore, in any given case, is diagnostic of paralysis of cerebral, and paralysis of spinal, origin. But there is a *second* kind of diagnosis afforded by the presence or absence of painful sensations. The presence of such sensations shews, that the lesion of the spinal centre is not complete destruction of its structure, for then sensibility would be annihilated; but that it is rather a state of *irritation* than of destruction,—a diagnosis of the most momentous kind.

What I have said of pain, is still more true in regard to spasm. Spasm never results from lesion of the cerebrum: it implies lesion of the spinal marrow. Spasm is the result of irritation, not of destruction, even of this latter centre of the nervous system. In any case of algo- or of spasmo-paralysis, then, we conclude that it is of spinal, not of cerebral, origin; and that it is irritation or erethism, not destruction or catalysis, of the spinal centre. Indeed it may be observed, in general, that affection of the cerebrum can only give rise to affection of the cerebral functions, as undue excitement of the spinal senses, of the perceptions, of the imagination, etc., or to diminution or abolition of these functions. *Pain and spasm belong to other systems.*

In my examination of patients, I frequently ask—"Have you the sensation of 'pins and needles'?—have you any cramp or spasm?" And I find the replies greatly to *prompt* the diagnosis—the diagnosis between irritation and destructive lesion, between arachnitis and myelitis. I leave these *suggestions*, for such alone they are, to the careful consideration of my readers.

IV. The Seat of Paraplegia. In Paraplegia, the first questions, after those relating to pain and spasm, are—Is there reflex action on applying an excitant, as heat, or cold, or tickling, to the foot or feet, or to the higher parts of the cutaneous surface?—and, how *high* does the point of excitability extend?

By these inquiries we learn, whether a portion of the spinal marrow remain intact below the seat of the disease or lesion; and by bearing in mind the oblique mode in which the spinal nerves leave the spinal marrow and canal, we learn the seat of this lesion still more accurately. In the absence of reflex actions, we learn the seat of lesion by ascertaining how *low* the loss of sensation extends. By ascertaining the existence of reflex actions, on one hand, and the downward extent and boundary of sensation on the other, the anatomist and the physiologist may form a very accurate diagnosis of the seat and limitation of the lesion. Nay, I have a case of no ordinary kind and interest under my care at the present time—for the opportunity of witnessing which I am indebted to Mr. Humby, of St. John's Wood—in which the disease is (probably) limited to arachnitis over the anterior part of the vertebræ, on which the brachial plexus takes its origin; for the case is one of spasmo-paralysis, limited to the muscles of the two hands and arms! I intend to give the case with all its details shortly; meantime I will merely mention, that a ptosis of the right eye-lid, and imperfect motion of the right eye outwards, have already ceased under a mild mercurial treatment, and the arms are rather more under command. The arachnitis had probably extended to the base of the brain. In the neck, the vertebræ project a little, giving the appearance of roundness, and throwing the chin upon the sternum, an effect also somewhat lessened. The case is probably one of syphilitic affection of the cervical vertebræ. At any rate, the light thrown upon the diagnosis by our anatomy and physiology, the only sources of knowledge we possess in such a case, is most interesting and most valuable.

V. On "the Nervous Circle" of Sir Charles Bell. There is a class of phenomena in some cases of paralysis, which, I think, throw a ray of light on the phenomenon which Sir Charles Bell has designated "*the Nervous Circle*", and defined thus:—"Between the brain and the muscle there is a circle of nerves: one nerve conveys the influence of the brain to the muscle, another gives the sense of the condition of the muscle to the brain." I think this view an error. I believe we have no consciousness of the condition of individual muscles, or sets of muscles, as we have no power of acting on such muscles. The sense, sometimes denominated the muscular sense, is, I believe, not in the muscle, or in any sentient muscular nerve, but in the nerve of touch, or of vision; and volition is not directed to any muscle, or set of muscles, but to the aim, object, and purpose of their contraction. We are guided in our voluntary actions, not by muscular sense or nerve, but by the sense of touch or of vision, by the *cutaneous* or the *optic* nerves. If there be loss of sensation in the fingers, the patient lets any object held by them escape and fall, unless the eye be continually directed towards them, to regulate the force of muscular contraction. If a patient have lost the power of sensation in the feet, he cannot walk in the dark; the eye is essential to the due action of the muscles of the lower extremities. I have a patient afflicted with partial paraplegia, who has no power of *balancing* himself without the aid of the eye. We have only to consult our own consciousness to be aware that "the nervous circle" is not between muscle and muscle, but between one sentient nerve, whether

of touch or of sight, and another. The sensation does not ascend from the muscle, nor does volition descend to it; but the former arises from a nerve of sense—of special sense—and the last is directed to an aim or purpose, in attaining which the former is the *guide*.

This short disquisition—and I intend to treat the subject more at length hereafter—has rather arisen out of the study of the *diagnosis* of diseases of the nervous system, than afforded a means of such diagnosis. Still, I believe, that real and sound physiological views always find their application in practice, sooner or later; and I have therefore thought it right to notice this amongst the "Certain Points in the Diagnosis of the Diseases of the Nervous System", which I proposed to myself as the object of this communication. The purpose of my life of labours is, if possible, to raise Medicine to the rank of Surgery, to exchange its empirical condition to that of science—its own science—Physiology, and to exclude the mere quackeries, whether in the profession or out of it. I shall conclude by a brief notice of—

VI. Pain along the Spine. Much has been said on the subject of "Spinal irritation", and of the presence of tenderness along the spine. If there be inflammation or disease of the vertebræ, their ligaments, etc., it is plain that pressure will induce pain. But the anatomist sees at once that no pressure on the spinous or adjacent tissues can occasion pain, where the malady is seated *within* the spinal canal. Besides, the pain now in question is one, if it really exist at all, of mere hyperæsthesia of the *cutaneous nerves*, generally mere hysteria. And although hysteria is *real* enough, as we see in hysteric palpitation of the heart, yet it must be viewed as *sui generis*, and be treated wisely, and not as we would treat organic lesion. Scarcely do percussion, or the application of a sponge, taken out of hot water, along the spine, afford us more definite results. The diagnosis in this class of diseases is, in fact, the result of an enlightened and enlightening *anatomy* and *physiology*. The diagnosis of the Diseases of the Nervous System must rise out of the diagnosis of its functions, and I may with great truth and justice repeat, that the detection of the *Reflex Spinal System*, and its distinction from the cerebral and the ganglionic, constitute the basis of all further progress in this department of our science.

Long ago, and on many occasions, I had set forth the *idea*—and much more than the idea—and in the idea is the *discovery*,—that the science of obstetrics is a branch of that of the reflex spinal system; and Dr. W. Tyler Smith has recently accomplished (as, I believe, no one else could have done), what I had suggested, in the following words:—"The whole question of abortion and parturition, and, in a word, of *Obstetrics*, as a science, is one of the true spinal system; and he will do humanity great service who, with suitable opportunities, will trace it fully."[1] We know that the mamma is an excitor of uterine action, whilst the ovarium presides over other parts of the generative functions. If Dr. Tyler Smith shall *prove* that the ovarium is the excitor of parturition, which appears so probable, I shall consider that proof a brilliant *discovery*.

14, Manchester-square, June 1849.

[1] On Diseases of the Nervous System, p. 341, § 1711.

LAST ILLNESS AND POST-MORTEM EXAMINATION OF SAMUEL JOHNSON, THE LEXICOGRAPHER AND MORALIST, WITH REMARKS.

By GEORGE JAMES SQUIBB, Esq., Member of the Royal College of Surgeons of England.

[*Read before the Harveian Society.*]

In the following paper, I propose to give a succinct account of the maladies under which Dr. Samuel Johnson, the great lexicographer and moralist, suffered, and to notice their influence upon his character and disposition. I shall, as far as possible, allow Johnson to speak for himself. To this, I shall append the very interesting post-mortem examination,[1] and a few practical remarks, in reference to the disease and its treatment.

Dr. Johnson, the subject of the following paper, was more or less a sufferer from his earliest childhood; having had the misfortune to be afflicted with *Scrofula* from his infancy, to such an extent, indeed, as to seriously affect the sight of one eye. He had, he fancied, contracted this malady from a diseased nurse; and it tended greatly to embitter the remainder of his life, and was probably the secret cause of that irascibility of temper by which he was so frequently disturbed. Unfortunately, also, at this time, Dr. Swinfen, the physician whom he consulted, imprudently expressed to him his opinion, that the "vile melancholy" which affected him so early in life, would probably terminate in insanity.

After struggling with this strumous disease, both mentally and physically, in his early manhood, he came to London in 1737, being then in the twenty-ninth year of his age. At this time his pecuniary resources were very limited, and his necessities consequently most urgent; he also suffered severely from an attack of dyspepsia, produced most likely from the want of regular and proper nutriment, coupled with the depressing influences attendant upon his sad condition. It is about this period that we find him signing himself "Impransus", in a letter to Cave; and upon one occasion, he and his friend Savage, not being able to raise the means to obtain their usual dinner in "Porridge Island", were content to inhale the fumes of pea-soup and boiled beef, for which that vicinity was then so celebrated; and probably those strange gesticulations, with which at this time he was so much affected, and which continued in after life, were, in fact, a species of *Chorea Sancti Viti*, or St. Vitus's Dance, induced by nervous irritability, the result of debility; for Johnson was of large stature, and always an immense eater. It is not the object of this paper to enter into details respecting the various literary struggles and undertakings, which occupied so much of Johnson's time and attention at this period of his history, further than to revert to such particulars as may have a bearing upon his case in a medical point of view. It will be necessary, therefore, to state, that in the year 1747, when about forty, and at the period he was engaged upon his great work, *The Dictionary*, he suffered acutely from an attack of his hypochondriacal disorder, and was found, during one of those fits, by Dr. Adams, in a most deplorable state of

[1] By the kind permission and liberality of Dr. Wilson.

despondency and depression—groaning and talking to himself, or restlessly walking the room:—and on that occasion he expressed his willingness to have a limb amputated to recover his spirits.

It has been well observed that Johnson's disorder had three distinct characters. At the age of twenty, the despondency which affected him amounted to hypochondriasis, and to his general irritability and fretfulness of disposition were added great dejection of spirits, to such an extent as to render his existence almost intolerable. At this early period, it is related by Boswell, he felt so languid and inefficient, as to be scarcely able to distinguish the hour by the town clock.

About the age of forty-five, when engaged in finishing his admirable preface to his great work, *The Dictionary*, his melancholy had attained its height or meridian, alternating with those paroxysms of irritability of temper, and, I may add, of arrogance and impatience of control, that so frequently distressed himself and his friends. From this morbid melancholy, however, he never perfectly recovered.

Johnson's health began to decline about the year 1766, and his end was, no doubt, accelerated by his mode of living, his habits being anything but conducive to health. At this time he was a late riser, a large eater, indolent and inactive; he occasionally ate voraciously, and maintained that "one unmindful of his belly, was likely to be unmindful of everything else"; he also at times drank freely of port wine, and was, as is well known, in the habit of taking immense quantities of tea. Habits like these, which his powerful and generally robust frame had enabled him to withstand with impunity, began, about fifteen years before his death, to seriously affect his constitution, producing at this time much general debility, and in 1777 commenced that series of illnesses which ultimately proved fatal, and to which I intend more particularly to direct attention. At this period he appears to have had an attack of the epidemic then raging, probably influenza, which terminated in asthma; but here I must allow him to speak for himself.

DR. JOHNSON TO MRS. THRALE.

Wednesday, Jan. 15, 1777. (One in the morning.)

"*Omnium rerum vicissitudo.* The night after last Thursday was so bad, that I took ipecacuanha the next day. The next night was no better. On Saturday I dined with Sir Joshua. The night was such as to oblige me to rise, and pass some hours in a chair, with great labour of respiration. I found it now time to do something; and went to Dr. Lawrence, and told him I would do what he should order without reading the prescription. He sent for a chirurgeon, who took about twelve ounces of blood; and in the afternoon I got sleep in a chair.

"At night, when I came to lie down, after trial of an hour or two, I found sleep impracticable; and therefore did what the doctor permitted in a case of distress: I rose, and opening the orifice, let out about ten ounces more. Frank and I were but awkward; but, with Mr. Levett's help, we stopped the stream, and I lay down again, though to little purpose,—the difficulty of breathing allowed no rest. I slept again in the day-time, in an erect posture. The doctor has ordered me a second bleeding, which, I hope, will set my breath at liberty. Last night I could lie but little at a time.

"Yet I do not make it a matter of much form. I was to-day at Mrs.

Gardner's. When I have bled to morrow, I will not give up Langton nor Paradise; but I beg that you will fetch me away on Friday. I do not know but clearer air may do me good; but whether the air be clear or dark, let me come to you. I am, etc.

"To sleep, or not to sleep."

It appears that he was repeatedly bled, although he had himself a natural aversion to it; and the voluntary bleeding to which he subjected himself, as before stated, was evidently the result of great confidence in his medical advisers. On one occasion, when speaking of it, he said: "*I shall try to escape another bleeding; for I am of the chemical sect, who hold phlebotomy in abhorrence.*" In the course of this attack alone, he had lost nearly forty ounces of blood; and the propriety of this excessive bleeding, at his age, for a spasmodic disorder that was afterwards relieved by opium, is very questionable: indeed, it can scarcely be doubted, that the dropsy and palsy, which subsequently ensued, were the effects of the debility produced by so great a loss of blood. In fact, as Dr. Madden truly observes, "the diseases of old men, whose vital energies have been expended in literary pursuits, are seldom to be remedied by the lancet."

At this period Johnson continued to suffer much from dyspnœa, for which he had recourse to large doses of ipecacuanha. He thus speaks of its uncertain effects in a letter to Mrs. Thrale.

"Lichfield, August 23, 1777.

"I have been trying a great experiment with ipecacuanha, which Akenside had inclined me to consider as a remedy for all constrictions of the breast. Lawrence, indeed, told me that he did not credit him; and no credit can I find him to deserve. One night I thought myself the better for it; but there is no certainty. On Wednesday night, I took ten grains: the night was again restless. On Thursday morning, I took ten grains: the night was again restless. On Friday night, I took twenty grains, which Akenside mentions as the utmost that, on those occasions, he has ventured to give: the night was, perhaps, rather worse. I shall therefore take truce with ipecacuanha."

Subsequently he took squills, etc. [Letter, March 18, 1782.] In 1783, a severe cause of anxiety increased Johnson's previous ill-health. It appears that he had, as already observed, been accustomed to be bled frequently for his attacks of asthma; but latterly, by the advice of Dr. Pepys, who had perceived that the legs had become œdematous, he had discontinued it; substituting opium in doses of from two to three grains during the day, or at bed-time. The day previous to the attack I am about to speak of, he had felt better than usual; and had even sat for his portrait, and walked a considerable distance without inconvenience. At night, however, having retired to rest for some time, he awoke; and upon sitting up, as was his custom, he was seized with a confusion in his head, and vertigo. This alarmed him; and anxious to know, from the natural dread which he always had lest his intellect should become affected, whether his faculties were really impaired, he composed, at the instant, a prayer in Latin, which satisfied him that his mind was perfect. Soon after, however, upon making an attempt to articulate, he found his

speech fail him, which, coupled with other circumstances, apprized him that he had been struck with paralysis. He then had recourse to wine; for the purpose, as he states, of "rousing the vocal organs." This failing to produce the desired effect, as might have been expected, he again lay down in his bed, and fell asleep. On his awaking, he wrote the following note to Mr. Allen, his immediate neighbour, but with much difficulty, as he states that he could not help making wrong letters; and the original note here alluded to, which I have seen, bears evident traces of the unsteadiness of his hand on that occasion. He had, previous to this, written some directions for his servant, who, upon entering as usual in the morning, to call his master, was naturally alarmed at not being able to understand him. This is the note to Mr. Allen.

"It has pleased Almighty God to deprive me of speech during the night. Come to me directly, and be about me as much as possible. Tell Mrs. Williams to shut out all company."

His physicians, Drs. Heberden[1] and Brocklesby, with Mr. Holder, his apothecary (and usual medical attendant after the death of Mr. Levett), were with him early in the morning; and from the remedies employed, they appear on this occasion to have treated his case both vigorously and judiciously, feeling probably, that the attack had been somewhat accelerated, if not caused, by the previous depletions to which their patient had been subjected. They prescribed ammonia, blisters behind the ears, and subsequently a large one over the head, and ordered nutritive diet, with wine. Under this treatment Johnson continued to gain strength, and ultimately recovered from the effects of his attack of paralysis. In a letter, dated June 23rd, 1783, he says: "I thank God, that less and less is suffered every day; and the physicians seem to think that little more need be done." After his recovery, he went for a short time to his native town (Lichfield), and on his return was engaged in some literary pursuits. Johnson survived this attack of paralysis a year and a half; but a complication of disorders had now set in, which rendered his life miserable: gout, asthma, and dropsy harassed and distressed him, in addition to which he had occasion to consult Mr. Potts about a sarcocele, under which he had long laboured.

We are now approaching the last year of Johnson's existence. In November, 1783, his spasmodic asthma returned with redoubled violence; but unwilling to have recourse again to the large doses of opium from which he had previously found relief, he now took *diascordium*,[2] a preparation of the herb "germander," with the syrup of poppies; for a dose he took a quarter of an ounce of diascordium, which he states was considered equivalent to about half a grain of opium. The asthma, however, increased; and to such a degree, that he could no longer endure the

[1] By the kind permission of Dr. Paris, the President of the Royal College of Physicians, I have been allowed access to Dr. Heberden's Case-Book, preserved in the library of the College, and there, under this date, I find what I cannot but presume to be Johnson's case; I say presume, as Dr. Heberden does not give the name of his patients, but numbers, thus: "6335 Paralytica. Vocis amissio et memoriæ labefactio cum sensuum confusione perstant perdies." The treatment, including the following draught, is excellent:—"℞ Carb. aromat. ℥ss; vini aloes, ℥ii; sp. tenuior: (brandy), ℥ii; aq. distill. ℥vi; ol. cinnam. gr. i. Fiat haustus, 6tâ quâque horâ sumendâ. Vesicatorium.

[2] There are two formulæ in the Pharmacopœia of the period (1783) for preparing Diascordium.

recumbent position, and was consequently obliged to sit up during the greater portion of the night. Probably, as "Boswell" suggests, the very severe winter of 1783-4, greatly aggravated his sufferings. At this time also came on the oppressive, and subsequently fatal, disease of dropsy, which again obliged him to have recourse, and with more frequency, to the use of opium, with which he also took large doses of squills; and, according to the advice of Sir Richard Jebb, he endeavoured "to strengthen the constitution by the bark, tame the cough by opium, keep the body open, and support himself by liberal nutriment."

In February, 1784, he experienced a marked and sudden remission of his symptoms, by voiding TWENTY PINTS of water. The day previous was passed by him in perfect abstraction from all society and worldly concerns, having desired his servant Frank to exclude all company, and to say that "his master was preparing himself to die." During the night, he gradually but successively passed the quantity of fluid, twenty pints, as I have before stated, with, as may be supposed, marked benefit and relief. This alleviation, however, continued but for a short time, as is evidenced by the following copy of a letter, for which I am indebted to the family of the late Dr. Heberden.

DR. JOHNSON TO DR. HEBERDEN.

"Bolt Court, Fleet Street, February, 1784.

"Dear sir,—When you favoured me with your last visit, you left me full of cheerfulness and hope. But my distemper prevails, and my hopes sink, and dejection oppresses me. I entreat you to come again to me, and tell me if any hope of amendment remains, and by what medicines or method it may be prevented. Let me see you, dear sir, as soon as you can. I am, sir, your most obliged and humble servant,

SAMUEL JOHNSON."

In a letter also to his friend Boswell, in the ensuing March, he desires him to write to Dr. Cullen, for his and others' opinion upon his case. This occasioned the following letter from Boswell, to Drs. Cullen, Hope, and Monro.

"March 7th, 1784.

"Dear sir,—Dr. Johnson has been very ill for some time, and in a letter of anxious apprehension he writes to me, 'Ask your physicians about my case'.

"This you see is not authority for a regular consultation; but I have no doubt of your readiness to give your advice to a man so eminent, and who, in his *Life of Garth* has paid your profession a just and elegant compliment: 'I believe every man has found in physicians, great liberality and dignity of sentiment, very prompt effusions of beneficence, and willingness to exert a lucrative art where there is no hope of lucre'.

"Dr. Johnson is aged 74. Last summer, he had a stroke of the palsy, from which he recovered almost entirely. He had before that been troubled with a catarrhous cough. This winter, he was seized with a spasmodic asthma, by which he has been confined to his house for about three months. Dr. Brocklesby writes to me, that upon the least admission of cold, there is such a constriction upon his breast, that he cannot lie down on his bed, but is obliged to sit up all night, and gets rest, and sometimes sleep, only by means of laudanum and syrup of

poppies; and that there are œdematous tumours in his legs and thighs. Dr. Brocklesby trusts a good deal to mild weather. Dr. Johnson says that a dropsy gains ground upon him; and he seems to think that a warmer climate would do him good. I understand that he is now rather better, and is using vinegar of squills. I am, etc., JAMES BOSWELL."

"Dr. Hope corresponded with his friend, Dr. Brocklesby. Drs. Cullen and Munro wrote their opinions and prescriptions to me, which I afterwards carried to London, and so far as they were encouraging, communicated to Johnson."

In May, however, he rallied sufficiently to enable him to again dine out with his friends, and in June he went to Oxford, and subsequently on a visit to his friend Dr. Taylor at Ashbourne. About November, he returned to London, at which time both the asthma and dropsy became more violent and distressing. It was now evident to those around him, that his condition was one of imminent danger. On the 30th of November a consultation of his physicians was held, at which Johnson proposed that his legs should be scarified, but his medical attendants opposing it, he gave in, although, as he said, he was not satisfied.

He rather rallied till the 8th of December, when at his renewed and urgent desire his legs were scarified by Mr. Cruikshank, to whom he said: "*Cut deeper; you are afraid of giving me pain, whilst I am anxious for life.*"

He now asked Dr. Brocklesby for his candid opinion of his case, and upon his giving him an unfavourable one, Dr. Johnson observed that from henceforth he would take no more medicine, a resolution he adhered to for the remainder of his life. On the 13th of December, he desired his servant to give him a case of lancets that he had in a drawer in his room, which was handed to him: upon those present observing the bed clothes move, they suspected his intention of puncturing his legs, and at once arrested his hand, but not in time to prevent him accomplishing his object; for upon turning down the bed clothes, they found an effusion of blood, caused by a deep incision which he had made in the calf of one of his œdematous legs. The loss of blood consequent upon this act, in his debilitated state, produced excessive exhaustion; stupor supervened, and at seven o'clock in the evening of that day, without a struggle, expired the great Samuel Johnson.

POST-MORTEM EXAMINATION:—Extracted from the MS. folio of "Dissections," by the late James Wilson, Lecturer on Anatomy in the Hunterian School of Medicine, Great Windmill Street.

"Wednesday, Dec. 15th, 1784, opened the body of Dr. Samuel Johnson for Mr. Cruikshank, in the presence of Drs. Heberden, Brocklesby, Butler, Mr. C., and Mr. White. He died on the Monday evening preceding. About a week before his death, Mr. C., by desire of his physicians, scarified his legs and scrotum, to let out the water which was collected in the cellular membrane of those parts, Dr. Johnson being very impatient to have the waters entirely gone. On the morning of the day on which he died, he repeated the operation himself, and cutting very deep, lost about ten ounces of blood; he used a lancet for this purpose; he was in too weak a state to survive such an apparently

trifling loss. For several years past, he had been troubled with asthma, for which he commonly used to take opium, and found that nothing else was of any service to him; he had discontinued this practice, however, some years before he died.

"On opening into the cavity of the chest, the lungs did not collapse as they usually do when air is admitted, but remained distended, as if they had lost the power of contraction; the air cells on the surface of the lungs were also very much enlarged;[1] the right lobe adhered very strongly to the diaphragm; the internal surface of the trachea was somewhat inflamed; no water was found in the cavity of the thorax. The heart was exceedingly large and strong; the valves of the aorta were beginning to ossify; no more fluid than common was contained in the pericardium. In the abdomen seemed to be incipient peritoneal inflammation and ascites; the liver and spleen were firm and hard; the spleen had almost the feel of cartilage. A gall-stone, about the size of a pigeon's head, was taken out of the gall bladder; the omentum was exceedingly fat; nothing remarkable was found in the stomach; the folds of jejunum adhered in several places to one another; there was also a strong adhesion by a long slip between the colon and bladder; the pancreas was remarkably enlarged; the kidney of the left side tolerably good, some hydatids beginning to form on its surface; that of the right side was almost entirely destroyed, and two very large hydatids formed in its place. Dr. Johnson never complained of any pain in this part; the left testicle was perfectly sound in structure, but had also a number of hydatids formed on its surface, containing a fatty gelatinous fluid; the right testicle had hydatids likewise, but the spermatic vein belonging to it was exceedingly enlarged and varicose. The cranium was not opened.

"N.B. Mr. White, assisting me to sew up the body, pricked his finger with the needle; the next morning he had red lines running up the arm, and a slight attack of fever."

Remarks. There are several points of practical interest in Dr. Johnson's case. The emphysematous state of the lungs had been considered to be "asthma." Emphysema, it must be remembered, was not understood as a distinct disease before Laennec's time. In Johnson's case, we perceive how the morbid change becomes proportioned to the age of the patient, as paroxysms become severer, more frequent, and more trying. In his case, probably, the emphysema added to the hypertrophy of the heart. The influence of the emphysematous lung upon the heart, is perceived in that œdematous state of the lower extremities, to which Johnson was subject.

Upon a review, therefore, of Johnson's case, we find it strongly confirmatory of the influence of disease upon the genius and temperament of the individual. We find him *inheriting* a strumous disorder, although Johnson was disposed to attribute it to having *imbibed* the poison from

[1] Dr. Latham, sen., averred that the plate of *emphysema* of the lungs in *Baillie's Morbid Anatomy*, was taken from the lungs of Dr. Johnson. I am informed also, that the right kidney is still in the possession of a descendant of the Mr. (subsequently Dr) White here mentioned.

a diseased nurse. At twenty he was attacked with the "vile melancholy,"—a hypochondriasis attributable, I am induced to believe, to an anæmic state of the blood, and which so much embittered his future life. Most fortunately for himself and mankind, bitter poverty, which certainly, in some degree, aggravated the disease by imperfect nutriment and probably a confined atmosphere, obliged him to make those efforts so important in the combating this sad disorder; for, as the poet truly observes,—

"Hurl but a stone, the giant dies."

It was therefore to the corporeal condition of Johnson, and to the train of thinking more immediately produced by that condition, that we are so much indebted. It has been well observed by my friend Dr. Miller: "Much has been said about the mind of Johnson modifying and influencing his bodily sufferings and the disease itself; but it would be an interesting inquiry, to examine, how far the corporeal condition tended to determine his character, and keep him continuously in one train of thinking." His mind, tinctured by morbid feelings even from earliest childhood, was of the most imaginative cast, and had it not indeed been for the consciousness of a bodily infirmity which continually possessed him, his mind might not have had that bias which led to such deep powers of reflection and a knowledge of moralities. Had he been blessed, therefore, with the "mens sana in corpore sano", he might only have been known to us as the poet, dramatist, and historian (and not moralist). Fortunately, I again repeat, Johnson was obliged to make those powerful efforts which produced the inimitable *Rasselas* in one week, and forty-eight printed octavo pages of his *Life of Savage* at one continuous sitting; and these exertions, combined with his love of society and the excitement produced by the animated conversations of the "Club", and the literary circle that surrounded him, were, I am convinced, the safeguard that prevented that morbid irritability and despondency becoming positive insanity. Johnson well knew his own feeling when he exclaimed, "Poor dear Collins" (who was then insane), "I have often been in his state, and therefore have it in great commiseration." It was this condition of body, that produced also that religious gloom and despondency and fear of death, that so strongly marked the character of "the great moralist." He felt the beauty of religion, and never ceased to desire the possession of it; but the same temperament, to which we have alluded, tinged his views upon this all-important subject. To many, in this respect, Johnson's character is mysterious; but if we take the view I have alluded to into consideration, all then becomes clear. I consider that there may be another cause of Johnson's morose disposition, more especially in the latter portion of his life; I mean what was presumed to be spasmodic asthma, but which I am inclined to think, from the post-mortem examination, was emphysema of the lungs. From the imperfect oxygenation of the vital fluid, "black blood" circulated through the brain, and hence arose nervous depression, gloomy thoughts, and deep despondency. It is evident that Johnson's physicians, in the earlier part of his life, did not treat his disorder judiciously. Swinfen, by his unfortunate remark "that it would probably terminate in madness", made an impression upon Johnson's mind that was never perfectly effaced: his intimate friend and medical adviser, upon

his coming to London—the excellent and good Dr. Lawrence—although the accomplished scholar and delightful companion, was not the practical physician, and had not much control over his rather unruly patient. We all recollect the "amusing scene", as Mrs. Thrale terms it. The patient belaboured the physician: and Johnson promises, in the letter already quoted, to abide by Lawrence's directions, and not read the prescriptions. Lawrence bled him, I cannot but think, too freely, and this increased the very malady which he was most desirous to cure. Fortunately, Johnson afterwards became acquainted with and took advantage of the kindness and decision of Brocklesby, the practical knowledge of Jebb, and the judicious treatment of Heberden, of all of whom, upon every occasion, their illustrious patient spoke in terms of high regard: and who had the happiness and satisfaction of assuaging the sufferings, and prolonging the life, of Samuel Johnson.

6, Orchard-street, June 1849.

ON THE REMOVAL OF OSSEOUS CATARACTS.

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THERE is a morbid change of the crystalline lens and its capsule, not very uncommon in persons of gouty and rheumatic constitutions, and which is also occasionally, though rarely, the result of injury. It is remarkable for the great suffering it causes, which can only be alleviated by the removal of the irritating body. The operation, however, is attended with more difficulty than might be expected from the notices in most ophthalmic works; as will be seen by the following cases.

CASE I. Mrs. Peters, aged 60, placed herself under my care on the 9th September, 1846. She stated, that two years previously, whilst attended by a physician for derangement of the general health, she was attacked with spectra, resembling black feathers waving before her left eye. This gradually increased; and at the expiration of six weeks she was seized with violent pain in the right eye, and almost immediate extinction of sight. She placed herself under the care of an eminent oculist, who depleted her largely and administered mercury freely, but without affording the least relief. She was then for some time under the care of Dr. Turnbull, without benefit. On examining the right eye, a yellow, apparently Osseous Cataract was visible, pushing forward the iris, and almost obliterating the anterior chamber. It was adherent to the margin of the pupil, though to what extent could not be ascertained, as atropine failed to produce the slightest dilatation. The iris had lost its brilliancy, and was of a dull olive-green colour; the globe was diminished in size, felt soft and boggy, and dark tortuous vessels were visible on the surface. There was not the slightest perception of light. The patient complained of agonizing pain in the eye, and a sensation as if something moved in it. At times, the suffering was so severe as to be scarcely bearable. The left eye presented appearances indicative of general chronic inflammation. The iris dull and discoloured; the pupil motionless; lens muddy and

of a greenish yellow; sclerotic slate-coloured, and marked with many tortuous purple vessels. There was pain in this eye, frequently severe, and on both sides over the brows, and down the sides of the nose. Although generally totally blind, she fancied that at times she had some vision with the left eye. There was great general debility, for which gentian and ammonia, followed by bark and soda, were prescribed with considerable advantage; and on the 12th November she was in a condition to bear the operation of removal of the lens, which was clearly the main cause of her suffering from the right eye. I succeeded in passing my knife across the cornea, but, in completing the section, found it unusually tough; on applying the sharp curette, no impression could be made on the lens, which was like a piece of stone. The adhesions were then freely divided, and another effort made to press out the lens, but without avail, for the iris was absolutely rigid, and did not yield in the slightest degree. An incision was therefore made in the margin of the pupil and the Cataract attempted to be seized with a hook, but without success. At length, by means of a pair of fine forceps, a portion was broken off, and I succeeded in removing the whole without any escape of vitreous humour. The Cataract consisted of a firm shell of bone, containing soft glutinous matter, like a mixture of gum and chalk. The flap having been replaced, cold wet rags were applied, the patient put to bed, and a full opiate administered.

I was agreeably surprised at finding that not the slightest unpleasant symptom followed this severe operation; the wound healed with rapidity, and at no time was there more inflammation than was necessary for the perfection of the union of the divided parts.

Case II. John Richardson, aged 64, had been subject to deep-seated pain in the right eye, muscæ, scintillations, and supra-orbital pain, for fourteen years: he was of a family in which gout was hereditary, and had suffered from it himself for many years. He had been leeched and blistered for the eye; but residing in rather a remote spot in the Fens of Lincolnshire, it would seem that his case had not received the attention its serious nature required. In about twelve months from the first attack, he became perfectly blind of that eye, and had since suffered almost constant pain, so excruciating at times as to be scarcely bearable. His health had become greatly impaired, and the sight of the left eye was failing.

I saw him first in April 1845. He was pale, haggard, and emaciated. The right eye was somewhat atrophied; the sclerotic, of a dark grey colour, was traversed by numerous tortuous violet-coloured vessels; a dusky red zone surrounded the iris, which was of a dull, greenish hue, and convex in form, obliterating the anterior chamber. The pupil was elliptical from above downwards, apparently dragged into that form by the weight of a Cataract, which was obviously pressing against it. This was partially separated from its attachments, so that it had sunk down, leaving a clear space in the upper fourth of the pupil. The Cataract presented the characteristics of an osseous change. The left eye was somewhat congested, and bore evidence of long-continued sympathetic irritation.

After having tried palliative treatment for a month, without benefit, I proceeded to remove the right lens on the 12th of June. The obliteration of the anterior chamber rendered it impossible to pass the knife

across it; I therefore made an oblique incision, from above downwards, in the lower half of the outer margin of the cornea, and extended it by a curved knife. Then, introducing the sharp curette, I proceeded to break up the Cataract. It was with great difficulty, and after many attempts, that I accomplished this; and it was necessary to divide several adhesions which had formed between the Cataract and the inner margin of the pupil. These difficulties prolonged the operation. With care, however, the whole of the fragments were cleared away, and the flap replaced: the eye was closed; cold, wet compresses were applied; the patient was put to bed, and forty drops of tinct. hyoscyami administered. The patient passed a good night; and when, on the fourth day, the eye was examined, the wound had united. The case proceeded in the most satisfactory manner; and the object of the operation was perfectly attained. Relieved from such a source of suffering, the patient rapidly improved in health and flesh.

Case III. Samuel Doyle, aged 54, became a patient of mine at the North London Eye Infirmary, on the 16th October, 1847. He had passed the greater part of his life in the army, had been much in the tropics, and had undergone a full share of the hardships of a soldier's life. For many years he had suffered from rheumatism, and his left eye had been attacked on three occasions with inflammation. After the second attack, the sight became considerably impaired; and he was rendered blind by the third, which was the most severe, and took place in 1830. From this time, the eye was a constant source of torment; the slightest local irritation, or an east wind, brought on inflammation and acute pains, extending over the side of the head, forehead, and down the nose. The pain was at all times increased by stooping.

The eye presented all the appearance of long continued disease. The sclerotic was of a dingy yellowish grey; numerous dark varicose veins coursed over the surface; and a dull red zone surrounded the cornea. The iris was convex, of a reddish brown, mottled with dark patches of lymph. The pupil was motionless, and bound by adhesions to a yellowish, stony looking cataract, which bulged through it. The eye felt (if I may be permitted to quote the expressive simile of a bystander), "like a stale gooseberry".

On the 26th October, I proceeded to remove the lens. The anterior chamber was not completely obliterated, and I succeeded in passing my knife[1] obliquely across the cornea, making the inferior section. To obtain sufficient space, the wound was further enlarged with the sabre knife. Many adhesions having been divided, an attempt was made, without success, to extract the lens. A free incision was then made in the margin of the pupil, and several other adhesions discovered. I then endeavoured to squeeze out the lens, but failed, and it became necessary to remove it piece-meal. The operation was tedious; but the whole of the fragments, which had constituted the ossified capsule, were at length taken away; the substance of the lens resembled gum water. From the length of time unavoidably spent upon the operation, and the injury inflicted on the iris, it was expected that the eye would have been attacked with acute

[1] This knife is considerably shorter and smaller than those used by Beer and Tyrrell; and the heel is rounded off.

inflammation; the flap was carefully adjusted however, the lids closed, and cold, wet rags directed to be applied. A full dose of henbane was administered. Contrary to my expectations, this man made a most satisfactory recovery; and although at times irritable, the eye no longer caused him the suffering which had rendered his life miserable.

Case iv. A soldier, during the Russian campaign, 1812, was struck by a spent ball on the left eye; the sight was immediately destroyed, and severe inflammation came on. From this time he was constantly subject to violent pains in the eye, lasting many days, and returning after they had seemed to have disappeared. He was seen by M. Desmarres, for the first time, in July 1846. On examination of the cornea, which was partially staphylomatous, an opacity was seen to occupy its lower third, and here there was partial synechia anterior. Near the cornea, the sclerotic was traversed by a number of reddish brown vessels, arranged in a circle, and forming a diffused injection. In the subconjunctival cellular tissue there were large violet-coloured varicose vessels, such as are seen in affections of the internal structures of the eye of long standing, and especially in choroidal disease. Scattered throughout the sclerotic, were slightly elevated blue spots, manifesting its attenuation. The iris was discoloured and motionless. In the pupil, which was open and misshapen, the crystalline was seen of a pale orange-yellow colour. This body, dislocated by the blow, had sunk in such a manner, that the upper border was inclined downwards and forwards, advancing into the anterior chamber, and touching the cornea; whilst above it, a portion of the back of the eye was visible. Vision had been lost about thirty-four years. The severe pains returned whenever the eye was inflamed, which was often the case. The patient was a tall man, but thin, and of a bad constitution: he declared that he had lost his health in consequence of the sufferings caused by his eye, and entreated speedy relief. M. Desmarres, judging that the suffering was caused by the presence of the lens in the anterior chamber, proposed to extract it; and with this view punctured the cornea, as in the operation for cataract, by an oblique incision. The lens was then seized with forceps; it grated like a piece of stone, and could not be extracted on account of the solid adhesions it had contracted with the neighbouring parts. Several other unsuccessful attempts were made. The corneal flap, on examination, presented a multitude of wrinkles, similar to those seen in the corneæ of the dead, after having been exposed for some time to the air; and could not be adapted, on account of the shrinking, to the other lip of the wound. A considerable portion of the cornea was then removed with the keratotome, as in the operation for opaque staphyloma; and M. Desmarres was then enabled, by means of scissors and forceps, to divide the adhesions and extract the lens, which was found to be entirely osseous, or stony. But little pain was felt; but three or four hours after the operation, severe hæmorrhage took place. The blood flowed abundantly, so that the bed of the patient was quite soaked. Compresses of ice, applied to the eye for five or six hours, diminished, but did not arrest, the flow of the blood, which continued for twelve hours after the removal of the cornea. The lids were then cleansed and closed, and covered with sufficient bandages to completely cover the eye. A considerable coagulum formed under the upper lid, and the hæmor-

rhage stopped, but the eye was completely destroyed by suppuration. The patient recovered after three months.

The crystalline was of an absolutely stony consistence; when struck with a stylet, the instrument resounded as if it had touched a stone; the cornea, placed in alcohol, presented the traces of synechia anterior, and it was thickest in the spot of the opacity. The anterior surface of the cataract presented numerous striæ, tolerably regular, converging towards the centre of the crystalline, which was covered with capsule, in part osseous, in part sound; the posterior surface was less dense than the anterior, and on being scraped with a pen-knife, a certain quantity was removed, which being placed dry in a bottle, resembled pounded stone.

Remarks. Ossification of the lens itself is extremely rare. Mr. Tyrrell relates one instance of it, where the capsule was opaque and thick, and contained a mass about equal to one-third of the original lens, hard and brittle, so that it broke on attempting to separate it from the capsule: it was the result of a blow, and was extracted from the eye of a lad of fifteen, who speedily recovered from the operation. A well-marked case is also related by Mr. Wardrop: it was from an eye sent to him by Mr. Allan Burns, of Glasgow. On dissecting back the choroid, the posterior chamber was found filled with a white pulpy mass, and on dividing the crystalline, its central portion was found converted into hard bone. The external laminæ of the lens were soft, those near the centre more consolidated, and the central portion itself of a deep brown colour, perfectly osseous, and exhibiting a laminated structure. Case IV is another example. And it is worthy of remark, that in two out of the three instances, this remarkable change was the result of a blow upon the eye: of the third there is no history.

Ossification of the capsule of the lens is the most frequent form of Osseous Cataracts. The character is that of a shell of bony matter irregularly deposited, some parts being thick, others as thin as tissue paper. The colour is yellowish, and when viewed in the eye, appears as if dotted with white paint. For the following analysis of the cataract extracted in Case I, I am indebted to Dr. Hoffman of the Royal College of Chemistry. "The ash left on incineration was found to consist principally of phosphate of lime; it contained besides small quantities of sulphate of lime, and traces of sulphate of potassa and chloride of sodium. It therefore has a very analogous composition to that of bone."

The agonising pain caused by these cataracts is of a neuralgic character, being the result of the constant irritation of the iris by the pressure of the hard body. So severe is it at times, that it causes temporary delirium; and I have known two instances in which the patients were driven into the pernicious practice of opium-eating, to drown their sufferings in stupor.

There is one point in the history of such cases as those I have related, which cannot fail to strike the observer: that, despite of the difficulty and duration of the operation, the amount of violence inflicted on the eye (which far exceeds that of the ordinary operation of extraction), and the diseased state of the organ itself, which might be supposed to render it prone to inflammation, the recovery is, in the

majority of instances, rapid and satisfactory. The unusual step adopted by M. Desmarres, of cutting away a large piece of the cornea, is of course an exception; and the alarming hæmorrhage described resembles that which occasionally follows the removal of a staphyloma, and is not to be anticipated unless such a proceeding be practised. It certainly may happen, as occasionally, though very rarely, occurs after extraction, that severe hæmorrhage may arise from a branch of the central artery of the retina, but in the three cases of this, with the particulars of which I am acquainted, there was good reason for supposing that a diseased condition of that vessel rendered it incapable of contracting.

In the performance of the operation, the almost entire obliteration of the anterior chamber by the projection of the lens and iris, renders it extremely difficult to pass the knife across it; in such a case, it would be found easier to direct the incision obliquely. That should be free; and if the cataract knife do not make it of sufficient size, the blunt-pointed sabre knife cutting on the convex edge, will enlarge it with facility. In the event of the adhesions to the cornea being so extensive as to preclude the possibility of performing the operation in this manner, it may become a question whether an incision directly across the cornea may not be the best mode of proceeding; the object in view is not to give sight, but simply to relieve suffering, and it must be familiar to many, that similar wounds of the cornea inflicted by accident unite kindly if judiciously treated. The great difficulty, however, is the extraction of the cataract. The iris having lost its elasticity, and being bound by adhesions to the lens, and possibly to the cornea, does not yield to pressure; and the lens, being solid, cannot be forced through the contracted pupil, even after the adhesions have been divided, with such an amount of force as can be prudently applied. The better way then, is to break down the osseous shell and remove it piece-meal, having previously divided the adhesions by sweeping round the margin of the pupil with a fine iris knife. Before placing the flap in apposition, a careful examination should be made, to see that none of the fragments are left. After the lids have been closed, two or three folds of rag, dipped in cold water, should be applied to the eye so long as is felt agreeable, and a full dose of hyoscyamus administered.

Many persons cannot take any preparation of opium, without subsequent nausea and sickness; and therefore hyoscyamus is to be preferred as a sedative after operations on the eye. A tincture, sent to me by Messrs. Taylor of Vere Street, made from henbane dried rapidly at a low temperature, then placed in hot bottles which are immediately sealed up, possesses so much strength, that 30 drops is a full dose. This I usually administer after eye operations, with the best effect.

2, Tenterden Street, Hanover Square, June 1849.

BIBLIOGRAPHICAL RECORD.

On Parthenogenesis, or the Successive Production of Procreating Individuals from a Single Ovum. A Discourse, introductory to the Hunterian Lectures on Generation and Development, for 1849. By Richard Owen, F.R.S. pp. 76. London: 1849.

The term Parthenogenesis, now proposed by Professor Owen, will, doubtless, henceforth be adopted into the language of science. Precision of expression is of peculiar importance in scientific literature: and we are indebted to the learned Professor for having reduced many ideas, which were previously crude and ill-defined, into words having definite meanings, and signifying distinct facts. The convenience of the term "homologue", for example, is daily more and more appreciated.

The volume before us contains the substance of the two first lectures of the course which has recently terminated; and as they are complete in themselves, and devoted to a curious and but little understood subject, they have been published in a separate form. After some excellent general remarks on that which must for ever remain a mystery to man—the first cause of life—those secondary causes, known as the phenomena of generation, are discussed. The essential conditions appear to be a nucleated cell, the product of a nucleated cell, and the combination of the two; the ovum having received the matter of the spermatozoon, is said to be impregnated, and the phenomena that thence arise are essentially the same, up to a certain point, in all animals, and consist of the formation of a germ-cell and its propagation of a numerous offspring, at the cost of the germ-yelk, by a series of reiterated spontaneous divisions. The progeny of the primary impregnated germ-cell, which may be called secondary germ-cells, constitute the germ-mass; this progeny resemble their parent with a diminution of size, to a certain stage of descent, when they may be ultimately reduced to their essential parts or nuclei. But when they cease to exist as germ-cells, they minister to the life of a being higher than themselves, combining to construct its tissues, and to impart important properties to its fluids. "But", says Professor Owen, "not all the progeny of the primary impregnated germ-cell are required for the formation of the body in all animals; certain of the derivative germ-cells may remain unchanged and become included in that body, which has been composed of their metamorphosed and diversely combined or confluent brethren; so included, any derivative germ-cell, or the nucleus of such, may commence and repeat the same processes of growth by imbibition, and of propagation by spontaneous fission, as those to which itself owed its origin; followed by metamorphoses and combinations of the germ-masses so produced, which concur to the development of another individual." (p. 5.) In proportion as we descend in the scale of animal life, we find that the number of the derivative germ-cells and nuclei which retain their individuality and spermatic power, is greater; and the number of those that are metamorphosed into tissues and organs, less.

The learned author then points out, in an interesting manner, the gradual ascent in the scale of animal life, beginning with the *Gregarina*—a mere cell containing fluid, with granules, and a firm nucleus, with one or more nucleoli. The next in order to this simple cell-like animal, are the polygastric infusoria; and in the fresh-water polype, or *Hydra*, a still further advance is made; but there is a very large proportion of retained and unaltered nucleated cells and nuclei, ready under favourable circumstances, each individually, by spontaneous fission and assimilation, to lay the basis of a new polype. The term "spontaneous fission" is, doubtless, familiar to the ma-

jority, at least, of our readers; but as few, perhaps, have reflected on the process and the means by which it is induced, we will quote the opinion of Professor Owen on the subject. "In the polygastria, when favourable influences of light, warmth, and abundant nutriment concur, a central body, which represents the nucleus of the impregnated germ-cell, sets on foot the special act of assimilation and spontaneous fission, and its divisions seem to repel each other to positions equidistant from each other, and from the pole or end of the body to which they are nearest. The influence of these distinct centres of assimilation is to direct the flow of the plasmatic fluid from a common course, through the body of the polygastrian, to two special courses about those centres. So much of the primary developmental processes is renewed, as leads to the insulation of the sphere of the influence of each assimilative centre from that of the other, by the progressive formation of a double party-wall of integument, attended by progressive separation of one party-wall from the other, and by concomitant constriction of the body of the polygastrian, until the vibratile action of the superficial cilia of each separating moiety severs the narrow neck of union and they become two distinct individuals." (p. 8.) When certain nucleated cells, aggregated in a particular part, take on a state of activity, the result of their increase by assimilation and multiplication, is to push out the contiguous integument in the form of a bud, which becomes the seat of subsequent processes of growth and development; and this mode of propagation is termed "gemmation". The Professor then proceeds to a consideration of that curious subject, the representation of a species by a series of individuals, of different powers and forms, succeeding each other in a cycle; as, for instance, the *Distoma tarda*, which, in the course of its life, successively assumes the form of a *gregarina*, a *cercaria*, and a *distoma*. V. Baer, who led the way in experiments on and observing the artificially impregnated eggs of the *Echinus*, found them to be first developed into a ciliated monadiform animalcule, like that of the *Medusa aurita;* but after four days, this animalcule had been metamorphosed into, or had given birth to, a minute creature resembling a *Beröe;* on the fifth day the animalcule unfortunately perished. In the autumn of 1845, Professor Müller discovered in the sea at Heligoland, an animalcule, which from its singular form, like that of a painter's easel, he called *Pluteus paradoxus*. In the following year he ascertained the change of this species into an *Ophiura* (or brittle star-fish), and that of another kind of *pluteus* into an *Echinus*. In the mollusca also, there are examples of this phenomenon. The embryo developed from the ovum of the compound ascidiæ quits the receptacle of the fixed parent in the form of a large cercaria, a freely swimming animalcule; then settling, becomes attached to a foreign body, and develops the organization of the ascidian.

Certain members of the class of insects present generative phenomena closely allied to this alternating mode of reproduction; and the account given by Professor Owen of such a condition in the aphides is highly interesting. "The impregnated ova of the aphis are deposited at the close of summer, in the axils of the leaves either of the plant infested by the species, or of some neighbouring plant, and the ova, retaining their latent life through the winter, are hatched by the returning warmth of spring; a wingless hexapod larva is the result of the development. This larva, if circumstances, such as warmth and food, be favourable, will produce a brood, and, indeed, a succession of eight larvæ like itself, without any connexion with the male. In fact, no winged males at this season have appeared. If the virgin progeny be also kept from any access to the male, each will again produce a brood of the same number of aphides; and carefully prosecuted experiments have shown, that this procreation from a virgin mother will continue to the seventh, the ninth, or the eleventh generation, before the spermatic virtue of the ancestral coitus has been exhausted. When it is so exhausted, a greater proportion of the nuclear germ-masses retained by the last procreant larvæ is

used up, individual growth and development proceed further than in the parent; some members of the last larval brood are metamorphosed into winged males, others into oviparous females. By these the ova are developed, impregnated, and oviposited; and thus provision is made for disseminating the individual, and for continuing the existence of the species over the severe famine months of winter." (p. 23.) Such is the view taken by the author, of a phenomenon which has proved a stumbling-block to many acute observers. Seven years ago that opinion was formed, and whilst confirmed by subsequent observations, it has assisted in explaining the "lucina sine concubitu" in other animals.

A controversy has arisen respecting the theory of alternation of generations, between Professor Steenstrup and Dr. Carpenter. Into the merits of this question, Professor Owen enters at great length; but as it is impossible for us, in our limited space, to do justice to the case, we are obliged to refer our readers to the book itself; one point he mentions incidentally, which we cannot pass by. "The reproduction of parts of higher animals has also been found to depend on pre-existing cells, retained as such. Mr. H. D. S. Goodsir has shown, that in the lobster, *e. g.*, so noted for the power of reproducing its claws, the regenerative faculty does not reside at any part of the claw indifferently, but in a special locality at the basal end of the first joint of each of the legs. This joint is almost filled by a mass of nucleated cells, surrounded by a fibrous and vascular band; and other nucleated cells intervene between this band and the outer crust. The vessels of the band pass onwards for about half an inch and return upon themselves, forming loops. When a claw is broken, or otherwise injured or disabled, the lobster or crab, by a violent muscular effort, casts it off at the transverse ciliated chink or groove which indents the reproductive segment. The new claw is developed by the multiplication of cells, which are soon divided into five groups, answering to the five joints of the future limb; these nascent joints are folded upon each other in the crab, but extended in the lobster; in both they are at first enveloped in a sac formed by the distended cicatrix; the budding limb ultimately bursts this cicatrix, and its growth is rapidly completed. A great proportion of the reproductive cells contained in the basal extremity of the injured limb is used up in the production of the new limb; but a mass of them is retained unchanged at the basal joint, and ready to renew the reproductive process when needed." (p. 49.)

The author remarks, that the physiologist congratulates himself with justice, when he has been able to pass from cause to cause, until he arrives at the union of the spermatozoon with the germinal vesicle, as the essential condition of development,—a cause ready to operate when favourable circumstances concur, and without which cause those circumstances would have no effect. The aim and object of the Professor is, to point out the conditions which bring about the presence of the same essential cause in the cases of the development of an embryo from a parent that has not itself been impregnated. The cause is the same in kind, though not in degree, and every successive generation, or series of spontaneous fissions of the primary impregnated germ-cell, must weaken the spermatic force transmitted to such successive generation of cells. It is longest retained and furthest transmitted in the vegetable kingdom; the zoophytes manifest it in the next degree of force: it is visible in the class of insects, and in the lower mollusca, and as it fades, it is seen in the reproduction of parts—when it is no longer capable of developing a whole.

Many philosophers and acute observers, British and foreign, have brought all the energies of their minds to bear upon the investigation of the phenomena of Parthenogenesis; but, able as have been the explanations offered of this singular condition, and ingenious the arguments brought forward, none seem so satisfactory, none so free from objection, as those by the talented author of this admirable essay.

A Physician's Holiday; or, a Month in Switzerland in the Summer of 1848. By John Forbes, M.D., F.R.S. Pp. 520. London: 1849.

Of the learned professions, there is not one which admits of so little recreation as that of Medicine. The lawyer may unbend his jaded mind, and recruit his strength during the "long vacation": the divine may usually command that convenient twenty days, conventionally known as "the clergyman's fortnight"; but to the wearied disciple of Æsculapius, all holidays are generally denied. Seldom indeed is it, however urgent the occasion, that he can absent himself for even a very few days from the scene of his labours, more especially if that be in the country. We all, nevertheless, stand in need of relaxation from time to time; and as a favoured few are able to enjoy it, it is no small boon to be informed how that can be obtained pleasantly and economically. The interesting volume before us shows how much can be accomplished in a short period by well-arranged plans. To all tourists, it will be a trustworthy and valuable travelling companion; whilst to those who appreciated the spirited Essays of Dr. Forbes, as they appeared in the *Review* created by his energy, so long supported by his talent, and so well known by his name, the perusal of the *Physician's Holiday* will be a source of unmixed pleasure.

The two first chapters afford general instructions to travellers. The following remarks are well deserving of attention by a very extensive class of persons: "So far from recommending rigid adherence to a precise and particular diet, I do not hesitate to say, that one of the great advantages of travelling in cases of this kind (dyspeptic), is that it affords a most favourable opportunity for breaking through the trammels of such a system. Nothing is so easy as to coddle and pamper the stomach into intolerance of all the more common kinds of food, by adherence to certain rigid formulæ of diet; and when this exclusiveness is once thoroughly established, it is hardly possible to break through it in the patient's usual sphere, although, while it exists, firm or stable health can never be attained. The institution of such a system of diet may be very proper, in the first instance, in order to give relief to urgent symptoms, to correct still greater errors in the mode of living, or to give room for a rational system of cure; but when it is made a permanent regulation, and when it and its universal accompaniments—the daily pill and potion—are relied on as the exclusive means of health and strength, nothing can be more delusive or more injurious." After having stated the difficulty of breaking through such a thraldom at home, the author goes on to say that it will be perfectly practicable abroad. "The bracing air, the brilliant sky, the animating scenes, the society of cheerful and emulous companions, and, above all, the increased corporeal *exercise*, will soon produce such a fundamental alteration in mind and body,—in spirits and stomach,—that what would have been felt like poison, will be here not only harmless, but wholesome. Therefore it is that I advise invalid travellers—those at least of the bilious, dyspeptic, hypochondriac, pill-taking class—to follow no special regimen, but to eat the food that others eat, with the sole proviso, that they seek for and see the sights as others do, take all the exercise their strength will admit of, and remember the golden rule of *moderation* at all times, but more especially at the commencement of their emancipation." (p. 31.)

Descriptions of Switzerland and of the Rhine scenery have been so often written, that no ordinary skill was required to avoid sameness and stale repetitions. These, however, Dr. Forbes has avoided: there is a freshness and raciness in his descriptions, a heartiness in the cause, and a thorough determination to cast care aside and make the most of the present, which positively infects the reader, and makes him in imagination one of the party. We might extract page after page of vivid narrative, but however much our

inclination leads us to do so, our space limits us to some of the most striking passages. The party were fortunate enough to witness the descent of an immense avalanche—a scene of singular and awful grandeur. The mass fell from that part of the base of the Eigher mountain, called the Schlossberg. "We were all suddenly roused and startled by a tremendous noise behind us, like a continuous peal of distant thunder, which made us instantly stop; and while we were in the act of turning round, our guides, shouting 'An avalanche!' pointed to the mountain behind us. We looked, and from the lower border of the mist which covered it, and out of which the hoarse loud roar which still continued evidently came, we saw a vast and tumultuous mass of snow rushing down and shooting over the edge of the sheer cliff into the air beyond. At first this had a pointed triangular or conical shape, with the small end foremost; but as the fall continued, it assumed the appearance of a cascade of equal width throughout. In this form it continued until its upper extremity had parted from the cliff, and the whole mass had fallen to the earth, renewing, as its parts successively reached the ground, and with still louder and sharper reports, the sound which had momentarily ceased while it was falling through the air. The whole of the process which has taken so long to describe was the work of a few seconds—half a minute at the most; and all was over and gone, and everything silent and motionless as before, ere we could recover from our almost breathless wonder and delight." (p. 229.)

The old goatherd, whose chalet was near the spot, assured Dr. Forbes that it was the largest avalanche that had fallen from the mountain during the last twelve years; and from subsequent examination, the mass of snow which fell was found to have been enormous.

The interest recently excited in England in behalf of Cretins and idiots, renders especially interesting the account of Dr. Forbes's visit to Dr. Guggenbühl's establishment on the Abendberg: it is his private property, and originated solely in his benevolent desire to benefit this wretched class of his countrymen. He does not, however, confine it to them alone, for within our own knowledge, he took back with him, about twelve months ago, an English idiot; and although but little benefit was expected by many, the child has made excellent progress, and is likely to become an useful member of society. Dr. Forbes speaks in high terms of the arrangements of the establishment, and was fortunate enough to secure the services, for the Asylum for Idiots at Highgate, of one of the most experienced of the Sisters of Charity, instructed under Dr. Guggenbühl's own eye.

The physicians at Bath, and the hydropathists at Malvern, would do well to look to themselves; for, if we mistake not, there are some hints in the book which will make the former successful rivals to the latter, and if we take the *vox populi* as an authority, that is saying a great deal. The small town of Leukerbad is celebrated for its hot baths, which are of the temperatures of 124°, 120°, 115°, 99°, and 94° Fahr. There are eighteen or twenty public baths, each capable of containing from fifteen to thirty-five persons, and numerous smaller baths, and they are thus used. The bathers, male and female, for (being clothed in long robes) both sexes mingle indiscriminately, go into the water at four or five in the morning, remain from one to five hours in the bath, and go into it again, in the afternoon, for two or three more hours. They manage it very comfortably, each person being provided with a small floating table and basket for holding the snuff-box, handkerchief, etc., or for eating off or playing on. The bathers dress and undress in heated rooms, and always retire, for half an hour or more, to a warm bed after the bath. The ordinary period of a course of bathing is twenty-five days, for which the patient pays a Napoleon; the water is used internally as well as externally, from two to ten glasses being taken early in the morning, with an interval of ten or fifteen minutes between each two. The baths are employed for many chronic diseases, especially cutaneous disorders, scrofula, chronic rheumatism, and indolent gout. Dr. Forbes observes that immersion

in a fluid of a temperature approaching or exceeding that of the human blood, for a fourth or third part of every twenty-four hours, during the space of a month or two, must produce some important modifications in the actual condition of the animal functions; and he adds—"As the waters of our own city of Bath are in many respects similar to those of Leukerbad, I would call the attention of the physicians of the former to what has been accomplished by the prolonged diurnal bathing in the latter place. If they will not make trial of the practice on scientific grounds, I expect that they will find it set on foot by some speculator from motives of mere personal interest. I believe that a grand success awaits the fortunate projector, who has the foresight or the boldness to establish a Leukerbad bath at *Bath*." (p. 311.) We hope that the physicians of the General Hospital at Bath, who possess such peculiar advantages for carrying the plan into execution, may give it a fair trial.

In laying down Dr. Forbes' book, let us heartily recommend it to our readers; and conclude by impressing upon all leading sedentary lives, or engaged in pursuits involving wear and tear of the mind, the importance of occasionally taking such a tour as that described in the volume before us. In the words of Dr. Forbes, "it will enable a large proportion of such persons to lay in a fresh stock of health, sufficient to last through the year, in spite of all the exhausting influences of confined air, sedentary occupations, and that overtasking of the mind to which so many of them are exposed, and which is the fruitful source of so many diseases." (p. 15.) Many who cannot afford to spend *a month* in Switzerland, may be able to enjoy *a week* amid the beauties of the English "Lakes"; or amid the sterner magnificence of such scenes as meet the ravished gaze of the traveller as he wanders by the banks of Loch Etive, or climbs the mountains of Arran or of Skye.

Pathological and Practical Observations on Strictures, and some other Diseases of the Urinary Organs. By Francis Rynd, Esq., A.M. Pp. 195. London: 1849.

The author commences with an elaborate account of the anatomy and physiology of the urethra, and then proceeds to consider those changes of the urethra to which the term Stricture is applied, and the effects produced thereby. He divides Strictures into three heads: the simple circular, the banded or bridled, and the irregular. Simple dilatation of the urethra behind the Stricture is the most frequent consequence of the obstruction; but other and more serious morbid effects are likely to arise, as abscess in perinæo, of which the author describes two distinct forms: one in which the rupture of the urethra precedes the formation of the matter, and is the cause of it; the other, in which the abscess occurs first, and opens into the urethra by bursting into it; both terminate in fistula. This chapter is concluded by a full description of the morbid changes of the bladder, which are the frequent result of Stricture, and which embitter the life of the unfortunate sufferer. The second chapter is devoted to the pathology, etc., of retention of urine; it is well written, but does not contain anything particularly novel. In the third chapter, the treatment of retention is described, and the author considers at length the three modes of puncturing the bladder. The operation through the perinæum he is entirely adverse to, nor does he show much favour to that by the rectum; the operation above the pubes is, it would appear, that most frequently practised in Ireland, and is decidedly preferred by the author. The remainder of the work is devoted to the treatment of Stricture, to the pathology and treatment of perinæal abscess, and to affections of the prostrate gland.

The book is very carefully written, and may be consulted with advantage by those who are desirous of refreshing their knowledge, as also by the student. So far as we can discover, however, it is simply practical; and has no claim to originality.

ARGUMENTS AGAINST THE INDISCRIMINATE USE OF CHLOROFORM IN MIDWIFERY. By S. WILLIAM J. MERRIMAN, M.D., Cantab., etc. pp. 27. London: 1848.

MISAPPLICATION OF ANÆSTHESIA IN CHILDBIRTH, EXEMPLIFIED BY FACTS. By G. T. GREAM, Esq., one of the Medical Officers of the Queen Charlotte's Lying-in Hospital. pp. 72. London: 1849.

OBJECTIONS TO THE INDISCRIMINATE ADMINISTRATION OF ANÆSTHETIC AGENTS IN MIDWIFERY. By W. F. MONTGOMERY, A.M., M.D., M.R.I.A., Professor of Midwifery to the King and Queen's College of Physicians in Ireland. pp. 20. Dublin: 1849.

The use of Anæsthetic agents in labour has been hitherto very limited in London and Dublin; and throughout the English and Irish provinces it has hardly met with more favour than in the capitals. In Scotland, on the other hand—both in the towns, and in the rural districts—the intoxicating of women with Chloroform, during parturition, is stated to be very common:[1] even in perfectly natural labour, the proceeding appears to be considered salutary, and in every respect justifiable. The explanation of this diversity of practice in different parts of the empire, we have heard remarked on, as extraordinary, and as indicative of national prejudice; but surely it is not necessary to assign so very contracted and mean a spirit to the medical profession, as the only solution of the otherwise seeming enigma. It was in Edinburgh, among his friends and his numerous pupils, that Professor Simpson first promulgated his truly great discovery, that Chloroform was a much more convenient, and a much better anæsthetic, than sulphuric ether: and it was also in Edinburgh, by the same distinguished Professor, that the practice of anæsthesia in childbirth was tried, and recommended. We attribute the greater prevalence of Chloroformization in Scotland, simply to the greater personal influence which Dr. Simpson, like every physician, has within his more immediate sphere of action: and we feel confident that the practice will very soon settle down into uniformity in all parts of the empire. If anæsthesia be too little resorted to in England and Ireland, this will ere long cease to be the case; and, on the other hand, if it be too indiscriminately employed on the northern side of the Tweed, the error will very speedily be corrected. To assert the contrary, would be to calumniate the profession. It is well worthy of notice, that the titles of the three pamphlets before us imply, that while their authors are opposed to the "indiscriminate" use, the "misapplication", or "indiscriminate administration" of anæsthetic agents, they are willing to admit that there are certain cases of labour in which they would sanction their employment; although in the interior of Mr. GREAM'S pamphlet, we find nothing warranting this interpretation. We can hardly suppose that the *universal exhibition* of Chloroform in parturition is approved of by Scottish obstetricians; and if not, the question between the men of the north and of the south resolves itself into one of degree, and cannot be regarded as one of essential difference.

With Dr. MONTGOMERY, we are not inclined to admit the similarity between the pain of a surgical operation and the pains of parturition. "I totally deny", says he, "that '*what holds good in relation to pain in surgery, holds good in relation to midwifery.*' No two things, having a partial resemblance, can be more essentially dissimilar than the pain suffered in a surgical operation and the ordinary, natural, physiological pain of labour, repeated at intervals, more or less regular, leaving, in general, the patient, in the intervals of their returns, free from suffering, *in perfect health*, and, perhaps, full of cheerfulness, or calmly sleeping; and as these pains increase in force and intensity, they carry with them the sweet conso-

[1] Vide *Edinburgh Monthly Journal* for October 1848, p. 209.

lation, so often thankfully expressed by the sufferer, that she knows she is all the nearer to the consummation of her fondest hope, to see, with happy heart and clear unclouded brain, her new-born treasure smiling beside her. A surgical operation is no part of a natural process ; and there is generally in the mind of all, an instinctive horror of the surgeon's knife,—ay, to such a degree, that even the strong man and the brave, who many a time, perhaps, has led his followers through the fiery struggle of the battle-field, undaunted, will recoil unnerved and sickening from the sight or touch of it ; and, as that knife slowly divides the tender skin, the quivering muscles, and the shrinking nerves, his spirit quails and sinks before the suffering, which promises no other boon but to save him from a life of protracted suffering, or from immediate death. A surgical operation is finished in a few minutes ; but if it were, like labour, to consist of several successive stages, which could only be accomplished after many hours' duration, what patient could survive its performance ?" (p. 7.) There can be no doubt of Dr. Montgomery being correct in stating, that what holds good in relation to the pain of surgery *does not* hold good in relation to midwifery. The profession, too, as a body are clearly of this opinion ; for, as Mr. Gream says,—while anæsthesia "in surgery became general in the shortest possible time, not only in this country but elsewhere, in midwifery it has not only failed to become general in practice, but having at one time gained some little favour, has lost it again, and has now almost ceased to be esteemed." (p. 5.) The first part of the quotation states a fact which is notorious; but we think that the expression "almost ceased to be esteemed" is decidedly too sweeping. Anæsthetic midwifery does not perhaps now possess so many uncompromising advocates as it did twelve months ago, but we are inclined to think that *the value of Chloroformization in a certain limited number of cases of labour is more generally admitted* among English and Irish practitioners than formerly.

The religious objections which Mr. Gream still holds to, have been elaborately, and, we think, successfully met by Dr. Simpson and others.[1]

Having made these general preliminary statements, we will be enabled to avoid recurrence to the topics, in the following separate accounts of the different pamphlets.

Dr. S. William J. Merriman. The pamphlet of this author is clearly and logically written. At the commencement, reference is made to the many and discordant letters and essays, which have appeared on Chloroformization. "The writers alluded to," says Dr. Merriman, "mention a few cases, and generalize upon them ; arguing thus from individual to general practice, not from general principles, as laid down by experience, to individual cases, in which the general rules may be more or less departed from, according to circumstances affecting the individual." (p. 4.) Impressed with this deficiency in preceding authors, Dr. Merriman studies,—

1. The history of midwifery, with reference to the establishment of general rules.
2. The nature and properties of anæsthetic agents : and
3. The circumstances which should govern the profession in their employment.

After some allusions to the meddlesome midwifery of former times, and to the progressive discoveries of Ould, Smellie, William Hunter, and others, we are reminded that "it was slowly and clearly demonstrated that the first duty of the practitioner is to let Nature pursue uninterruptedly her own course ; and that if she deviates from this course, or is unequal to her task, his next duty is still to respect her laws, and to follow them as closely as possible, in whatever means he is called upon to employ." (p. 7.) And at page 11, we are told—what cannot be too often stated to, or too much impressed on every ob-

[1] Vide Number for April, p. 350.

stetric practitioner—"that the recurrence for many hours of labour pains, hardly ever by itself produces danger to life". This undeniable truth we hold to be a conclusive argument, against the administration of the subtile and potent vapour of Chloroform in natural labour. We should be bringing the parturient female into *some* danger at least: for respite from pain is bought at too venturesome a price, if that price involve the hazard—however slight—of life. It is only when there are difficulties and dangers to overcome, that we are authorized to interfere: and if there be difficulties and dangers which Chloroform, judiciously given, may avert,—which we believe to be the case,—then, but only then, let our parturient patients be subjected to its subtile and potent influence. We do not agree with Dr. Merriman (pp. 21-23) in thinking that the only valid reason for using Chloroform in parturition, is the power which it possesses of allaying pain. Several times we have seen Chloroformization of much benefit in rendering the male urethra lax, in introducing the catheter in difficult cases; and analogous advantages have been recorded as resulting from it in hernia. In a primipara, or in others, therefore, with unyielding rigid os uteri, and strong expulsive pains, intoxication with Chloroform vapours might hasten delivery, and diminish the risk of rupture of the uterus.

The following passage is deserving of consideration:—"Chloroform has been given, in general practice, in cases of excitement from various causes, with very good effect; for example, where a patient has laboured under want of sleep, which ordinary means have failed to procure, Chloroform has quieted the nervous irritability, and brought on quiet and natural repose. With this object, it has been administered with advantage in midwifery, to alleviate the extreme restlessness in tedious labours from anxiety and want of sleep; it is the peculiar property of this class of medicines, that they prevent the sensation of pain, but do not, in moderate doses, prevent the continuance of those actions which cause the pain; hence the Chloroform may be given in doses sufficient to suppress some of the agonizing pain inseparable from parturition, while it still allows the recurrence of the actions of the uterus, and thus does not stop the progress of labour, as might be feared: indeed, it has been supposed to have hastened the birth on some occasions—a result which appears not improbable, for the sedative action of the vapour may have removed altogether the exhaustion previously felt by the uterine nerves, and have rapidly restored to them their pristine energy; on the contrary, it is equally conceivable that, under other circumstances, it may not have restored the nervous irritability, but rather have depressed it, and so, as asserted by some practitioners, have prolonged the labour, by lessening the contractile powers of the uterus". (pp. 22-3.)

We have not room to give more extracts: and we now would conclude our notice of Dr. Merriman's pamphlet by adopting a portion of its last paragraph:—"If a practice have been resorted to, the employment of which was not imperatively called for, and death ensue, whether arising directly from the treatment, or from other causes, how awful is the reflection that we have, in even the slightest degree, hastened the termination of life. Let us bear incessantly in mind, that ORDINARY CASES REQUIRE ONLY ORDINARY MEANS OF RELIEF, AND THAT EXTRAORDINARY REMEDIES CAN ONLY BE PROPERLY EMPLOYED IN EXTRAORDINARY CASES, WHERE ORDINARY MEANS ARE INAPPLICABLE OR INSUFFICIENT."

MR. G. T. GREAM. The variety of topics discussed by Mr. Gream is very great. The following is his table of contents:—"General remarks; Difference between anæsthesia in surgery and midwifery; Report of the Edinburgh Obstetric Society; General feeling regarding anæsthetic midwifery; Religious publications; Etherization not sleep; Similarity of ordinary intoxication and etherization; Complete insensibility must be induced to allay the pains of labour; Narcotism allays uterine action; Why so many cases of artificial

delivery in Edinburgh? Do the maternal passages yield from the effects of anæsthetic agents? Labour rendered difficult by etherization; Children injured by etherization; Mortality among children at Edinburgh; Division of etherization into degrees.—First degree:—Drunkenness. Second degree:—Lascivious dreams; Calumny on English women; Causes of lascivious dreams; Dreams not in accordance with the natural impressions. Third degree:—Convulsions. Fourth degree:—Deaths after operations; Deaths after delivery. After effects of etherization; Uncertainty of the effects of etherization; Deductions derived from the facts recorded."

Mr. Gream is opposed to Chloroformization, as much from conscientious scruples as from medical reasons. This is apparent from the following extract:—"It is sad enough to listen to the delirious exclamations, and wandering expressions incidental to cerebral disease: but to be the actual promoter of a state of gross drunkenness, that condition being increased in its revolting character by the accompaniment of obscene expression and actions, as will be hereafter shown to have occurred, is sufficient, I should hope, to deter most men from attempting such practice in any case of midwifery to which their attention may be called. Let the word drunkenness be heard by any morally educated patient, instead of the softer and more fascinating terms of 'soporization,' etc.: and I will undertake that, however strong an advocate she may be of anæsthesia, the pains of labour, however severe, will be no inducement to her to seek a condition stamped by such immorality".

In *operative interference during Labour*, we agree with Mr. Gream in thinking, that to render our patients insensible, is greatly to increase their danger. "Mr. Banner mentions that 'there is one class of cases in midwifery in which Chloroform ought not to be administered, and that is when instruments have to be used; unless the head is so far advanced that the forceps can be used with exactness, and without any risk to the mother. Men are not all equally clever and expert in the application of the forceps; and much injury has been avoided by the patient's expressions of pain when there has been a wrong application of them. A writer of much celebrity', adds Mr. Banner, 'after an extensive practice of forty years, says, should much pain be experienced by an attempt to lock the blades when well applied, as regards their position, we may be pretty certain a portion of the neck of the uterus is included in the grasp of the instrument; we must inquire on which side of the pelvis the pain is felt, and withdraw the blades from it and introduce them anew.' By depriving the patient of sensation, we take away a great guide to the correct application of the forceps." (p. 20.)

Lascivious dreams arise, says Mr. Gream, from Chloroformization; and the ideas, passing through an amorously excited and bewildered mind, are apt to find vent in such words as ought not to be uttered. He considers these dreamy ravings as arising from two distinct causes, viz.: 1, irritation of the cerebellum consequent on Chloroformization; and, 2, the excitement incidental to manipulation of the sexual organs in operations upon those parts, or to the presence of the fœtal head within the pelvis. We think Mr. Gream has succeeded in showing that parturient women, or others, may, and sometimes do, when under the influence of Chloroform or ether, give utterance to expressions indicative of transient delirium, and sexual excitement: but it also appears, from the statements of many observers, that by bringing the patient more fully under the influence of the drug, these unpleasant manifestations are prevented. We consider that the chance of the occurrence of lascivious ravings, is a strong and legitimate argument against the *indiscriminate use* of Chloroform in labour; but, knowing that by due tact in the administration of the drug, the patient can generally be safely and quickly got through the stage of excitement into that of anæsthesia, we do not attach so much importance as Mr. Gream to the risk of "indecent dreams, and actions in accordance with them." Moreover, firmly believing of the women of England as we—as all—do, that

"The very ice of chastity is in them",

we do not think that *any* accidental inappropriate exclamation by a virtuous lady drugged by chloroform, could, in the strict sense of the term, be indecent or immodest. In many labours, *in which no drugs had been given*, we have heard delirious manifestations partaking of a sexual character, especially when the head was passing the os uteri; but we never for one moment imagined that there existed any mental impurity in the sufferers. We recognized the transient delirium of parturient women so admirably described by Dr. Montgomery in the *Dublin Journal* for March 1834, and we cannot help thinking, that the lascivious (?) indications recorded by Mr. Gream may fairly be included among the phenomena so well illustrated in the memoir just referred to. In making this statement, however, we should be unjust to Mr. Gream were we not to admit, that the mass of facts which he brings forward on this subject are very valuable, and tend, along with others, to restrict the use of Chloroform in labour to certain rare and exceptional cases.

Death from Chloroformization, considering the enormous number of cases in which it has been practised, must be regarded as upon the whole a rare occurrence; but still, the cases of poisoning from Chloroform are sufficiently numerous to show us that we have no right to subject women in natural labour to danger, merely to save them from pains which they can bear without injury. We therefore agree with Mr. Gream in attaching importance to the fatal cases; remarking, however, that he enumerates among them, some which can hardly, with certainty, be included in the list.

The Conclusions arrived at by Mr. Gream are thus given in the last page of his pamphlet.

"1. Inhalation of ether or Chloroform cannot procure an immunity from the pains of labour, because no degree short of the fourth degree of narcotism can have this effect, and narcotism, carried to this extent, paralyzes the uterine action.

"2. Etherization,[1] in midwifery, has no beneficial effect, but simply allays pain. Even if this could be accomplished without interfering with the uterine action, it would not be justifiable to employ it, for pain (in good midwifery practice) does not endanger life, and it would be improper to employ so dangerous an agent solely to alleviate pain.

"3. If patients escape the immediate danger of etherization during labour, they all become, to a greater or less extent, more predisposed than they otherwise would be, to subsequent puerperal disease.

"4. Etherization is likely to be very injurious to the child." (p. 71.)

The only indication of a tendency on the part of Mr. Gream to modify his opinions, is contained in the following sentences appended to the "Conclusions", now quoted:—"I do not intend to condemn the practice of those who, in the operation of turning the fœtus in utero when the liquor amnii has escaped, have occasionally employed it. If rupture of the uterus was apprehended, perchance etherization might have been beneficial. I have never met with any such cases requiring it; for in all instances, however difficult, by time and perseverance, I have been able to accomplish turning, not only without the employment of relaxing agents, but with perfect safety to the mother, and, with only one exception or two (in first deliveries), to the child. In no other instance, however, even admitting it here, do I think there is the shadow of an excuse for employing anæsthesia, either in natural or complicated labour." (p. 71.)

We must now leave Mr. Gream's pamphlet, commending it to the study of all interested in the important subject of which it treats.

III. Dr. W. F. Montgomery. This pamphlet, like everything emanating from its distinguished author, is entitled to much consideration.

Dr. Montgomery is exceedingly dissatisfied with some persons, (whom he

[1] Mr. Gream, in common with many other writers, uses the term "etherization", when he means *chloroformization*.

does not name,) for taking up Chloroformization as a matter of charlatan-craft. He alleges that some have "so far forgotten the delicacy and reserve with which such matters should ever be treated, that paragraphs have been inserted in the public newspapers, announcing the delivery of ladies, 'while in a state of insensibility from Chloroform'; and those medical men who have hesitated about, or rejected, the indiscriminate use of Chloroform in natural labour, have been set down as deficient in energy, or in feeling and humanity." (p. 2.)

Death from Chloroformization is thus spoken of by Dr. Montgomery :—

"Chloroform, for a variety of purposes unconnected with labour, has caused death—and that, *sudden death!*—and is it probable—is it reasonable to expect—that women in labour shall constitute the only class exempt from the dangerous influence of this drug? Under all circumstances, 'it is a fearful thing to die'; but it is doubly awful when death comes suddenly, and finds the being, who is about to pass from time into eternity, utterly bereft of sense and reason, and without the power even to ejaculate, with the disciples in their hour of danger, 'Lord, save me, I perish!' An observation of Professor Meigs, of Philadelphia, in his letter to Dr. Simpson, is so entirely consonant with my sentiments on this matter, that I here adopt it as my own: 'I readily hear', says he, 'before your voice can reach me across the Atlantic, the triumphant reply, that an hundred thousand have taken it without accident. I am a witness that it is attended with alarming accidents, however rarely. But should I exhibit the remedy for pain to a thousand patients in labour, merely to prevent the physiological pain, and for no other motive, and if I should in consequence destroy *only one* of them, I should feel disposed to clothe me in sackcloth, and cast ashes on my head, for the remainder of my days'.

"Now the object for which it is so eagerly proposed to incur the risks already alluded to, is simply to do away with the pain attending natural labour. Then the question presents itself,—Is the ordinary pain of labour, *in general*, so great in amount, so intense in its character, or so injurious in its consequences, that we would be justified in running any risk to avoid it, or rather a part of it, for the whole of it cannot be annulled? I think universal experience would answer these queries in the negative.

"Experience has shown that very rapid, easy, and comparatively painless labours, besides the risk of present injury which they entail, are by no means those least liable to serious casualties during their progress, or from which women recover most favourably.

"I have met with but one instance of a woman who bore children without pain. The lady had eight children, and she never gave birth to one of them without being in the most imminent danger of losing her life from hæmorrhage. It seems to me, that the greater pain and risk encountered by the human female in parturition, are intended (as they certainly are calculated) to teach us our mutual dependence on each other for kindness and assistance; and thus to draw closer the bonds of love and attachment, which should unite man to the cherished object of his dearest and holiest affections."

Dangers and Disadvantages arise from Insensibility during Labour. Dr. Montgomery remarks :—"In the progress of ordinary labour, our judgment is assisted by the natural expression of the pain suffered, as indicating its true character and efficiency; and so affording a guidance not lightly to be dispensed with. I was once consulted about a case, where the gentleman in attendance told me himself that he had attempted, as he thought, to rupture the membranes with his pointed nail, and only desisted in consequence of the patient's complaints that he was cutting her; which was the fact, as he was endeavouring to perforate, not the membranes, but the distended and attenuated anterior section of the cervix uteri. In this instance, had the lady been in a state of unconsciousness, we can hardly doubt that mischief of a very serious kind would have ensued.

"It has been asserted that pain is the agent which destroys life in protracted labours, because it can be shown that the mortality is in direct proportion to the length of time the labours lasted; and it is alleged that, if the pain of parturition were cancelled by anæsthesia, we would have more favourable results, that we would 'increase the chances of a more speedy and a more healthy convalescence.' Now, I would ask, does any one believe that, when a woman dies of the effects of a protracted labour, it is the pain suffered which causes her death, and not the long-continued struggles, and efforts, and pressure on soft parts, causing fever, vascular congestion, inflammation, and sloughing, etc.?—or can we believe that Chloroform could annul or remove these agencies which really do the mischief, even were we rash and reckless enough to keep the woman under its influence throughout the lengthened ordeal of her tedious labour?

"Do women recover better who have been treated with anæsthetic agents during labour, and are there fewer deaths among them? The results recently published by Dr. Simpson[1] of 245 cases of labour, all treated with anæsthetic agents, of which five died, or one in forty-nine, most assuredly do not confirm such a doctrine." (pp. 12-13.)

In what cases of labour ought we to give Chloroform? Dr. Montgomery grapples with this question in a very fair and candid spirit. After repudiating the idea of using it in perfectly natural labour, he goes on to say:—"While I object, and most strongly and solemnly, to the *indiscriminate* administration of Chloroform in natural labour, I fully acknowledge its value and utility in general in obstetric operations, such as instrumental delivery, turning a child in utero, or the removal of a retained placenta, and also in some peculiar circumstances of natural labour, independent of any operation. Thus, I would give it in a case where the pain greatly exceeded its usual amount, and became intolerably severe. I would also use it in those cases occasionally to be met with in practice, in which a severe nervous pain is superadded to the ordinary pain of labour. Thus, in one case, such frightful pain was endured along the course of the sciatic nerve that I thought the lady would have lost her senses, although a woman of a steady, sensible, and strong mind, and naturally very patient. In another instance, a spasmodic pain attacked the sphincter of the rectum with such overpowering intensity and torture as to render the lady absolutely frantic. In such instances as these, I would certainly have administered this remedy, had it been known at the time of their occurrence, which, however, was before its introduction into practice.

"With regard to its use in obstetric operations, while I fully acknowledge, as I have already stated, its value and utility *as a general rule*, I must add, that I think there are circumstances which should modify our *universal* adoption of it even for such purposes, lest we should, for the sake of avoiding a temporary inconvenience, run the risk of entailing a more serious and permanent evil. Thus, for instance, in a case of retained placenta with hæmorrhage, and a very flabby, uncontracted, and inert uterus, I think we would better consult the ultimate safety of the patient by omitting it, and subjecting her to the temporary suffering of passing the hand into the uterus, which would thereby be more effectually stimulated to contract, and to retain its contraction.

"And again, I would say that, instead of commencing, in all operations with the crotchet, by first putting the patient under the influence of Chloroform, and throwing her into a state of insensibility, it would, in my judgment, be more judicious to wait before giving it, for a reasonable time after reducing the head, to see whether the uterine energy might not be sufficient by itself to force down, and perhaps expel the diminished head, a result

[1] The five cases referred to above, have been declared by Dr. Simpson not to have been deaths from Chloroform. EDITOR LOND. JOURN. OF MED.

always most desirable, for many important reasons, and which we will certainly be much more likely to impede than promote, by placing the patient in the first instance under the paralysing influence of Chloroform.

"Then again, in all such cases of instrumental delivery, we must never forget that our patient, if under the full sedative influence of Chloroform, has lost all power of warning us of any accidental error which we may commit in operating, of which her pain would warn her, were she not in a state of insensibility; it therefore behoves us, under such circumstances, to use the utmost caution and circumspection (at all times most necessary, but here in a far greater degree), lest, without being aware of it, we should inflict an injury which our best efforts afterwards might fail to remedy." (pp. 18-19.)

In noticing these interesting pamphlets, our object has been, neither to conceal nor to obtrude our own opinions, but to make the respective authors speak for themselves. In doing so, we think we have placed valuable information before our readers. Those, however, who wish to master the subject of anæsthetic midwifery in all its details, must peruse the writings of Dr. Simpson, Dr. Snow, and others, in addition to the essays which have now been under our review.

Principles of Scientific Botany; or, Botany as an Inductive Science. By Dr. J. M. Schleiden, Extraordinary Professor of Botany in the University of Jena. Translated by Edwin Lankester, M.D., F.R.S., F.L.S., etc., Lecturer on Materia Medica and Botany at the St. George's School of Medicine, London. Plates and Wood-cuts. pp. 616. London: 1849.

A good treatise, in the English language, calculated to make the reader acquainted with the opinions of the various investigators of vegetable physiology, and, at the same time, to exhibit it as an inductive science, has long been a desideratum. To Dr. Lankester, then, the gratitude of the student of Botany is due, for having rendered accessible to him the researches and philosophical observations of Dr. Schleiden.

The following subjects are treated of in the work:—

First Book. Chemistry of Plants. 1. The inorganic elements. 2. The organic elements. *Second Book.* On the Plant-cell. 1. Form of the plant-cell; The cell regarded as an individual; Cells in combination, and intercellular formation. 2. Of the life of the plant-cell; Functions of the individual cell; Life of the cell in connexion with others. *Third Book.* Morphology. 1. General. 2. Special. *Fourth Book.* Organology. 1. General. 2. Special. *Appendix.* Analytical papers; Lists of old trees; New passages in the third German edition of the first and second books; On the use of the microscope. To this last part of the appendix we would, in passing, direct the attention of those engaged in microscopical researches.

The size of the work, and the manner in which the subjects are treated of, precludes us from giving an analysis. Dr. Schleiden has evidently, in addition to his own laborious researches, made himself master of everything which had been done in the study of vegetable organography and physiology up to his time. In comments on each paragraph, he gives critical observations on the opinions of previous observers; and generally condemns the common practice of attending to forms, and giving them names expressive of no physiological fact. The following quotation well expresses his views on some of the common expressions which we meet with in Botanical works:—"Botanists who imagine that the object of Botany is merely the correct definition of many species for their herbaria, will blame me for superficiality and want of profundity, in that I have so briefly and roughly treated the forms of leaves, which are the most essential grounds for the definition of species. I cannot help this: I merely find in these, as it may happen, good and bad methods of nomenclature for various partly or wholly divided surfaces or borders, for filiform or

solid forms,—nothing at all botanical, much less, therefore, the properly scientific part of Botany. If a slender filiform leaf be called a petiole, I have no objection to it, if nothing else be called by this name but a stalk-like leaf; but when it is superadded that the lamina is suppressed here, this is unscientific and false: if a leaf merely developed into a plate be alone called *folium sessile*, there is nothing to be said against the term; but when, in addition, it is said that the petiole is abortive here, this is again pure imagination. Whence in all the world does it follow from the essence of a plant, that a leaf must regularly consist of lamina and petiole? The entire method in use up to this time, of describing the leaf according to blade and stalk, and of reducing all other forms under this conception, might so far have value, if we would from the analogy of zoology, hold by the most perfect form, in order to obtain a type, with which to connect all others as deviations; then, however, we must start from the compound leaf, as evidently the most perfect. But it is as false to call all deviations, abortions, and Nature's unsuccessful attempts at formation, as it would be ridiculous to say that in *Monas lens* the toes and nails, the cartilage of the ear, etc., were abortive. Expressions such as 'Nature has here attempted, she has deviated from her type,' are altogether unscientific, and no better than childish anthropopathy. In *Mesembryanthemum*, for instance, Nature has not deviated from the type of leaf-formation. but her type is different here from what it is in other plants; each in its kind is perfect, attaining the grand purpose of all vegetable development, the development of the most manifold construction of form from the very simplest elements." (p. 267.)

In conclusion, we would recommend to our botanical friends the study of Dr. Schleiden's *Principles of Botany*, translated by Dr. Lankester. They must peruse it, if they desire to make any progress towards as perfect a knowledge of structural and physiological botany as has been hitherto attained.

Memoirs on the Ganglia and Nerves of the Uterus. By Robert Lee, M.D., F.R.S., Physician to the British Lying-in Hospital, and Lecturer on Midwifery at St. George's Hospital. *With Five Engravings.* 4to. pp. 36. London: 1849.

It is well known to the profession, that Dr. Robert Lee has long and laboriously been engaged in researches on the Ganglia and Nerves of the Uterus; and that while some admit that he has proved their existence and continuity with the sympathetic and spinal nerves, others maintain that he has been entirely misled; that he has, in fact, mistaken absorbent vessels and tendinous fibres for nervous structures! We are inclined to think, however, that the delineated dissections, descriptions, and corroborative testimony of the many eminent men brought forward within the work now before us, establish the reality of Dr. Lee's discoveries. We commend the evidence to the notice of all interested in anatomy and physiology, especially to those who are interested in the elucidation of the reflex physiology of parturition.

Cerebral Affections occurring most commonly in Infancy and Childhood, including notices of their History, Causes, Diagnosis, Prognosis, and Treatment. By Valentine Duke, M.D., etc. pp. 90. Dublin: 1849.

To discuss profitably the Cerebral Affections of Infancy and Childhood, larger limits are required than ninety sparsely printed pages. Dr. Duke, however, has attempted this impracticable task; and has thereby prevented himself from producing, what would have been much esteemed by the profession—a good clinical treatise on this class of diseases, which, from their frequency and formidable character, are of great interest to all, but especially to those who are engaged in general family practice.

On Healthy and Diseased Structure, and the true Principles of Treatment for the Cure of Disease, especially Consumption and Scrofula; founded on Microscopical Analysis. By William Addison, M.D., F.R.S., Licentiate of the Royal College of Physicians. pp. 320. London, 1849.

The object of Dr. Addison is, at the outset, to establish an analogy between vegetable and animal pathology, and especially between the "retrograde metamorphosis" of plants, and scrofula. The following paragraph will point out pretty clearly his views on the subject:—"Retrograde metamorphosis occurs, when the form and qualities of a texture are completely changed by the intrusion of elements distinctive of a prior or lower type; as when the green chlorophylle cells of the leaf intrude upon and displace the coloured cells of the petal; or when the structure of the stamens assumes the characteristics of the petals. In these cases, the function, quality, and character of an organ are subverted, not from the intrusion of elements wholly foreign to the organism, but in consequence of the displacement of natural elements, by others of a prior or lower type." (p. 20.) These remarks, which are contained in some observations on vegetable morphology in the Introduction to his work, he proceeds to apply to the pathology of animals.

The remaining part of his work is divided into two parts. Part I. treats of Practical Physiology, Practical Pathology, and Practical Psychology. In his chapter on Practical Physiology, Dr. Addison says that the evolution of the tissues in the embryo takes place in the following order:—cells, forming soft parenchymatous, or corpuscular granulation textures; fibres, being of a more coherent nature; and lastly, cartilage and bone. The fibrous tissues, he considers, are of a higher grade of development than the cellular; and he moreover describes the capillary blood vessels as partaking of the character of the textures to which they are distributed; those entering serous membranes having their walls composed of fibrous elements, and those supplying the mucous membranes and secreting glands having their coats formed of cellular or corpuscular elements. In the process of nutrition, there may be a defect in the metamorphosis which the elements of the blood undergo; and the excessive formation of colourless cells in the irritated blood vessels of a part "clearly shows, how the elements of any special texture may become mingled with, or supplanted by, cell-organisms furnished from the blood."

In his chapter on Practical Pathology, Dr. Addison treats of *Scrofula* and *Inflammation*. He differs from those who describe tubercle as a matter *sui generis;* and considers it as merely one of the modifications of the colourless elements of blood. He says that he has "repeatedly examined with the microscope the material deposited in the air cells of the lungs in pneumonia, and compared its characters and appearance with that forming a tubercle, without being able to detect any more essential or specific difference between them, than exists between purulent matter recently excreted, and that of an old chronic abscess." He admits that the cells of recent tubercle contain a greater amount of fatty or oily matter than those of an abscess; but does not consider that this affords sufficient grounds for making a specific distinction. The essential element, both in scrofula and inflammation, is then, according to Dr. Addison, the abnormal formation of cells,—in other words, a retrograde development; but in the latter, the cellular development is soon replaced by that of the part affected, whereas in Scrofula the cells overrun and destroy the natural fabric. The latter of these phenomena he proposes to designate by the term *vis scrofulosa*. "If," he says, "as we may well do, we use the term vis medicatrix naturæ to express the reproduction of the special from the general, and thereby include the phenomena of cures; so, analogously, we may use the term vis scrofulosa to express the immerging of the special

in the universal; thus including the chief and most characteristic phenomena of scrofulous disease." (pp. 77-8.)

A highly interesting and instructive chapter on PRACTICAL PSYCHOLOGY follows those which we have just noticed. The following quotation contains the groundwork of the author's views on this subject.

"All the facts of human experience have long been grouped in four great classes: 1, the inorganic; 2, the vegetable; 3, animal; 4, man. This classification we assume to be appropriate, on the ground of antiquity and universal assent; and if appropriate, then, according to the authorities cited, causes are, *ipso facto*, suggested. Assuming then, in conformity with this classification, the existence of four causes, let us, in order to avoid confusion, designate them by the symbols *a*, *b*, *c*, *d*.:—

"*a*. Being the sign of the cause or power, upon which the properties of inorganic matters depend,—their cohesion, crystallization, weight, impenetrability, and affinities.

"*b*. The sign of the morphological force,—the organic vital power of vegetable structures; as evidenced in growth, nutrition, reproduction, and secretion.

"*c*. The sign of the power from which springs the sensual perceptions, the emotions, and emotional movements of animals: and

"*d*. The symbol of the power embracing the thoughts, mind, and moral sentiments of man.

"Upon this view of the subject, it is evident that, in vegetable bodies, the vital morphological force (*b*) does not supersede the inorganic force (*a*), but is superadded to, and incorporated with it. Growth, nutrition, and secretion, coexisting with cohesion, weight, and impenetrability. So in animals, the cause of sensual perceptions and motions (*c*) does not supersede either the morphological or the inorganic force (*b* and *a*), but is superinduced and incorporated with them. And lastly, in man, thoughts, mind, and moral feelings (*d*), are superadded to, or engrafted upon, the lower animal, vegetable, and inorganic natures. The subject, therefore, may be thus represented:

1st Class.—Inorganic,—a
2nd Class.—Vegetables,—$a + b$.
3rd Class.—Animals,—$a + b + c$.
4th Class.—Man,—$a + b + c + d$.

"This quadripartite subdivision of the causes of human life enables us to appreciate distinctions in the terms, structure, constitution, temperament, and mind. For inorganic bodies have a structure; vegetables have a structure and a constitution; animals have a structure, a constitution, and a temperament; and man has a structure, a constitution, a temperament and a mind. Moreover, there are distinctions in the organs of the human body coordinate with this subdivision: bones, ligaments, and fibrous textures, administering to the inorganic properties, cohesion and form; lungs, liver, digestive organs, and blood, to the morphological functions; ganglia, nerves, and muscles, to motions and sensual perceptions; and the brain proper to intellect and mind." (pp. 92-94.)

The importance of attending to the distinction of neurological from morphological phenomena is obvious; yet it is too often either neglected or insufficiently attended to. Dr. Addison clearly points out how the two may coexist, or be independent. In the structural changes which take place in the human body, the nervous system is generally affected, because its elements are intimately mixed up with the texture affected; while in many cases, neurological phenomena exist independently of organic lesion. Hysteria, especially, is an instance of the latter kind; and the following observation of Dr. Todd, quoted by Dr. Addison, well expresses its character:—"It would be superfluous in me to enlarge upon the importance of your having accurate views of the characteristic signs and symptoms of hysteria; you all know how frequent a malady it is, and you doubtless also know how various are the

symptoms it exhibits, how apt it is to mimic other diseases affecting the most different parts of the body; and so accurately does it simulate the characters of disease of more serious import, that it will often deceive the physician, requiring the greatest care and discernment to distinguish the hysterical from the organic malady." (p. 108.) It is evidently because the neurological phenomena of disease, being often most prominent, have hitherto been chiefly attended to, that the diagnosis of hysteria has been so obscure. Organic disease is mostly morphological and neurological; hysteria is neurological alone; and when the two coexist, the difficulty of diagnosis is greatly increased.

In his practical deductions from these observations, Dr. Addison points out the importance of attending to the power operating from within—the mind—as an element in the treatment of disease. We quote his remarks on the relative importance of mental and corporeal remedies.

"Outward agents are necessary to the life of man, and they are also causes or conditions of disorder and disease; so the inward psychological agent is necessary to the phenomena of life, and also influential in producing disturbances and disease,—the living body, the subject of the morphology, being, as it were, the connecting link of the series,—standing between the visible and the invisible,—having, on the one hand, exterior agents and influences; and on the other, interior powers and impulses. It is scarcely necessary to adduce particular examples, to establish these almost self-evident propositions. It is well known that things from without, and emotions from within, are productive of illness, discomfort, and disease, traceable in the morphological functions of the body; and that the will of the person has, within certain limits, a control over both. It follows, these propositions being true, that, in order to preserve health, outward objects—air, water, food, climate, heat, and light, require attention, care, and selection; that the temperament, or emotions, need control, governance, and cultivation; and that the intellect, or mind, profits by example, experience, and education. That which is true universally, is of course true in particular instances; and therefore, in the treatment of particular diseases, and in our efforts to cure Consumption, we frequently find the best endeavours opposed by unfavourable external conditions we cannot alter; by irritating emotions we cannot quell, and mental anxieties we cannot remove. In large and populous cities, where multitudes of persons live crowded together in wretched habitations, following unhealthy occupations, with insufficient food, an impure atmosphere, and bad water, health is at a low standard, and the mortality is excessive. For the sickness and mortality above the natural average, the physician knows the cure; but it is beyond his power to employ or enforce the remedy. He cannot feed the hungry, purify the atmosphere, or clothe the naked, nor alter the social position of his patient so as to admit of change of situation. It is in these instances that unfavourable external conditions cut at the root of infant life, deteriorate the morphology of the structure, and produce a dire amount of inflammatory and scrofulous disease.

"In the better classes of society, who command the comforts and conveniences of life,—and who, therefore, rear more of their children into youth,—new sources of illness arise, in the emotions, passions, and temperament, mental avocations, and disposition; whereby various nervous, hysterical, and hypochondriacal, disorders are produced. These neurological and mental disturbances have very often their root entirely in habits and education; and it happens, therefore, frequently in such complaints, that unreasonable expectations are formed of the resources of medical art, when the real origin of the malady is educational, and beyond its proper sphere. Medicines come within the category of external agents exercising specific influences on the morphological functions, and are therefore specially adapted for the treatment of inflammation and scrofulous diseases; but not applicable, with the exception, perhaps, of narcotics, to disorders springing from temperament

and mind, and dependent on misdirection, misgovernance, and ignorance. Medicines hold the same relation to the human body, that manures and composts do to vegetation; they are powerful agents, to be used only upon experience, and directed to their proper object,—morphological phenomena. There are what the farmer call *hot* manures; which means, that they are extremely strong, and if applied in too large a proportion, burn up vegetation,—that is, cause it to droop and wither as if fire had passed over it; but which, if applied in proper quantity, act favourably, and cause the plant to grow strong and healthy. Precisely in the same sense, the medicines we employ are *hot*,—that is, powerful in accelerating or depressing nutritive functions; and therefore demanding judgment, care, and education, in their use.

"It is, therefore, only when the morphological functions are ascertainably wrong or disturbed, that drug medication, as a general rule, is applicable; and if, in neurological and mental disturbances, too much be expected from the medicines of the physician, disappointment ensues. This begets distrust; loss of confidence adds to the original distress; and the consequence is, that resource is often found in a lively faith in some innocent specific. A change of medicine, larger promises, and new faces, change the irritating idea, and effect the cure. In this country, where so large a proportion of society is able to command the luxuries of life without labour, and where the educational standard, in public schools and universities, is so high, disorders from emotional or nervous causes, and from overwrought mental exertion, are very common. And if the routine of a fashionable medical practice were looked to as the criterion, it would, I think, be found that, for one well-characterized idiopathic morphological disease, there will be four of simple disorder of nerves and brain from emotional and mental causes.

"The influence of the higher powers of temperament and mind, imagination and belief, as exciting and continuing causes of disorders, has been generally thought too ideal to be of practical importance in the treatment. Hence, emotions, faith, and distrust, as hygienic and therapeutic agents, have fallen into unmerited neglect. 'Physicians,' says Lord Bacon, 'are some of them so pleasing and comformable to the humour of the patient, as they press not the cure of the disease; and some other are so regular in proceeding according to art, for the disease, as they respect not sufficiently the condition of the patient.' A gentleman was very angry with his medical attendant for telling him he was nervous; but he was afterwards pleased with another for telling him 'his liver was as white as a sheet, and his mucous membrane like scarlet.' The one was as good a guess as the other; but the emotion excited was irritating and unfavourable in the former case (for persons do not like to be thought feeble in the control of their emotions), but soothing and favourable in the other,—for the cause appeared more unquestionably beyond his own control. Admitting, in its full extent, the agency of temperament and mind as disturbing causes, and knowing that it is the affectionate and warm-hearted who are most apt to be influenced by the hope of specific material remedies for complicated neurological disorders, it is our duty to strengthen their hopes of recovery by sympathy and consideration; and, whilst complying with all reasonable desires, to discountenance fanciful proceedings and measures of treatment, which first annul the judgment, and are then mercenarily pursued by subjecting the intellect to the imagination. The greatest call upon the resources of medical art is made, when a strongly emotional character co-exists with actual morphological disease,—hysteria, with inflammation or scrofulous disease." (pp. 122-126.)

Part II. treats of the Symptoms, Causes, Therapeutics, and Cure of Consumption.

The chapter on Semeiology contains, together with some valuable remarks, records of several instructive cases of tubercular Consumption, embracing "a general outline of the symptoms observed, or complained of, by

those affected with Consumption; pourtraying the constitutional nature of the malady; the wide extent of its sympathies; together with its anatomical and other relations." (p. 180.)

The chapter on Etiology is one which should be carefully studied. The ravages of disease are not to be considered as confined to the organ which, as appears during life, is most prominently affected. "All the most recent and careful pathological investigations demonstrate in every morphological disease, particularly in children, and in such as are scrofulous, that though one organ or texture suffers more prominently or severely than the rest, and from which, therefore, the disease derives its most characteristic features and name, yet it is not there the whole disorder is to be found; anatomical changes are not confined to that organ, but are more or less extensively present in others also. The conclusions upon this point, derivable from simple visual inspection after death, are confirmed and extended by the microscope. And, as our refined analysis proves that Consumption cannot make sensible progress in the lung without involving sundry forms of texture; so, in like manner, it demonstrates that no serious anatomical change can take place in any organ, without analogous textures elsewhere evincing, when microscopically examined, a more or less decided disposition to similar alterations. When, therefore, we speak of infants dying of teething, pneumonia, or diarrhœa; and of youth dying of measles, scarlet fever, or hydrocephalus, it is necessary to bear in mind that the terms convey no adequate information with regard to the extent or ramifications of the malady. They may refer us to the organ which has suffered most, but afford no information upon minor or secondary anatomical changes in the rest." (pp. 188-189.) And, *vice versâ*, when we speak of recovery from a disease, the term implies no more than the relief of the patient from the most prominent malady. The sequelæ of some prior illness often unfold themselves after such apparent recovery; and hence it is necessary to be acquainted with the history of previous illnesses and cures of the patient.

It is observed, that the mortality is greatest up to the third year; and that it again undergoes an increase between fifteen and twenty-five years. In the first case, the growth of the embryo before birth must be taken into consideration. It appears subject to two causes: its own inherent morphological properties, defect of which produces monstrous growths, moles, and blemishes; and an external cause, arising from its connexion with and dependence on the mother, defect of which, interfering with its nourishment, produces scrofulous disease.

Then, within the first year after birth, we have the establishment of the phenomena of respiration, reception of food, and dentition; and atelectasis, pneumonia, diarrhœa, convulsions, and teething, remove twenty per cent. during this period. Dr. Addison dwells here at some length on the natural history of the lung, as contributing to explain the large amount of sickness and mortality occasioned by pulmonary disease. Atelectasis, or imperfect expansion of the lung at birth, may, as well as pneumonia, leave some of the lobules useless and condensed; and this condensed tissue, though we have no positive proof of its identity with tubercular matter, bears the same relation to the surrounding parenchyma. Both may remain immersed without visibly disturbing the general health; and both, when new sources of irritation are applied, may become foci of retrograde morphological changes in the surrounding textures. Phthisis is not merely a malady "arising simply from hardened or useless portions of lung, of any particular kind or special origin: but from an altered nutrition,—a retrograde morphology,—with excreting properties in the pulmonary textures around it."

In assigning causes to disease, we are apt to regard only that which is most obvious. For instance, when a person has been exposed to wet or cold, to scarlet fever, or pneumonia, and gets consumption, we say that the latter disease was caused by the wet or cold, etc. Now there is no invariable con-

nexion between these; but the wet and cold, scarlet fever and pneumonia, are *events* completing a concurrence of conditions, of which a previously existing anatomical *state* is one. A foreign body, as a musket ball, may remain in the lung imbedded in a dense, smooth, glistening cyst, and we say the patient has recovered. But we have also formed fibrous adhesions in pericarditis; these are very undesirable, but as they are incidental to the cure, we cannot altogether elude them. The patient here has been cured, but has not recovered. The formation of the contractile cicatrix from a burn is an analogous occurrence. There may then be, in the lungs, an apparent cure of the atelectasis, pneumonia, or injury from external causes, yet not a recovery: an anatomical state may remain, which waits only some new cause, a new irritation, or a succeeding malady, to determine a retrograde metamorphosis. The following are the conclusions at which Dr. Addison arrives on this subject: "First—Anatomical changes or states remain after the cure of wounds and diseases, which possess more or less of permanency, and though not evolving symptoms, yet affect the future health of the person. Secondly—These anatomical states are *veræ causæ* for differences of constitution or diathesis,—because the aggregate expression of the whole cannot be the same when important parts are altered. And, in the lung, they are predisposing causes of Consumption; because, from an universal law, the nutrition of natural textures in contact with unnatural states, is disposed upon slight events, to go back to the general, rather than keep up to the special form." (p. 216.)

These conclusions establish the importance of attending, especially in infancy and youth, not only to the symptoms of the chief malady and its attendant complications, but to the time, progress, and results of the cure. And we must further make a distinction between the anatomical states resulting necessarily from the most perfect cure, as cicatrices, adhesions, opacity of the cornea after ulceration, hardened lobules after atelectasis; and those of which tubercle is the type in the fibrous, and ulceration in the mucous, membranes. The weakly or delicate class is hence divisible into two sub-classes: the former being peculiarly liable to asthenic forms of illness; the latter to scrofulous disease and Consumption. In treating a patient, we have to study his history, "with a view to determine,—whether the organization be in all important parts sound and undamaged, and the constitution therefore robust; or,—whether the structural changes of a former cure possibly render the constitution delicate; or, lastly,—whether the defects of a cure establish the scrofulous diathesis.

"In the first class, many events or irritating causes will pass off harmless; and when disorders do occur, they are prompt and regular, easily recognized, and easily treated. In the second class, minor events or irritating causes will provoke disturbances which are tardy and irregular; nutrition in contact with the anatomical changes of cures being disposed to general, rather than special, types. In the third class, retrogradations spring up or supervene, without any noticeable event or adequate external cause, the constitution is scrofulous, and Consumption probable. And it may be laid down as a general rule of practice, that those active interferences, as regards the abstraction of blood, purgation, etc., which may be proper and needed for inflammation in persons of the first class, will be improper and injudicious for those of the other two classes." (p. 219.)

The last chapter relates to the THERAPEUTICS and CURE of Consumption, and contains some highly valuable observations on the following subjects:—Facts relative to cure in Fractures and External Disease; on Growth and Absorption; the Doctrine of Interference; the Process of Cure a relative Phenomenon; Alterative agents; Synthetical facts, regarding the growth of Scrofulous Disease in relation to Therapeutics and Cure: Cases, and Conclusion. The remarks throughout are illustrated by cases. The length to which we have extended this notice precludes us from saying more, than that this chapter is of equal merit with the rest of the work.

PRACTICAL REMARKS ON THE USE OF THE SPECULUM IN THE TREATMENT OF DISEASES OF FEMALES. By THOMAS B. MITCHELL, M.D., Fellow and Licentiate of the Royal College of Surgeons in Ireland, Master of the South-Eastern Lying-in Hospital, and Lecturer on Midwifery in the Dublin School of Medicine. 12mo, pp. 83. Dublin: 1849.

DR. MITCHELL's little book may be regarded as a sign of the times,—a result of what all engaged in practice know to be a fact,—that *the Speculum is in fashion*. Some years ago, when MR. ACTON advocated its use, his conduct was looked on disapprovingly by the majority of the profession; and it is alleged, we believe truly, that some of our obstetric physicians still proclaim its employment to be un-English, and grossly indelicate. In such sentiments, we have no participation; though we respect the character and admit the skill of some of those who hold them. *Unnecessary* examinations with the Speculum deserve to be denounced, by every right-feeling man, as abominable breaches of propriety; but then they are *not more*, but *less* flagrantly so, than unneeded vaginal exploration by the finger; for, as Dr. Mitchell remarks, "the instrument can be introduced, and the diseased part brought into view, without any exposure, save what is requisite to show the end of the Speculum." (p. 16.) When symptoms suggest the presence of serious uterine disease, we are bound to use every available means to discover the nature of the patient's malady; but, on the other hand, we are not justified, on mere surmise of trivial affections, which can be successfully managed without specular or digital examination, to propose either the one or the other of these distressing ordeals; for distressing in the extreme are they, at all times, to every modest woman.

The cure within late years of various chronic cases, the nature of which had not been detected till the Speculum was used, has naturally reached the ears of many female invalids, and led their minds to the belief, that they too were suffering from similar affections. This has occurred in several cases within our own knowledge; as we have discovered from patients, in whom there was no uterine disease, consulting us and others, under the impression that they were so afflicted. From circumstances somewhat analogous, the stethoscope got quickly into great vogue, and became regarded with mysterious respect by thoracic invalids, real and imaginary. When we affirm that the stethoscope and the Speculum have become *fashionable*, we must admit that this has, to a great extent, arisen from the notoriety of the advantages derived from exploration by them, in cases formerly misunderstood. Let it not, however, for one moment be supposed, that we deem fashion anything but a dangerous guide to the physician; we only desire to call attention to the fact, that in two remarkable instances, it is in the main coincident with sound medical doctrine; and in doing so, let us say, in friendly caution to those yet on the threshold of their obstetric career, that such coincidences are too apt to make dangerously facile the declension into the ways of charlatanism, often, alas! more lucrative than the paths of scientific medicine.

Dr. Mitchell's book, we repeat, is a sign of the times, and, as such, has value; but we cannot discover that he has added to our stock of knowledge; and to some of his opinions and statements we demur.

In the preface, we are informed by the author that, in the preparation of his notes, he "consulted the works of Montgomery, Churchill, Astruc, Capuron, Manning, Lee, Bennet, Ashwell, Whitehead, etc., from whose valuable pages he has received much information, which he takes this opportunity of acknowledging." In place, however, of this general and jumbling citation of authorities, it would have been better, in the body of the work, more frequently to have given to each their meed of merit. For example, the names of Dr. H. Bennet and others ought to have been associated with the observations on uterine disease in the virgin, and in the pregnant woman, and also, with what is said of the uterine surface, whence polypi fall.

The plates are so very unsuccessful as representations of uterine disease, that we do not think they will be understood.

PARTURITION, AND THE PRINCIPLES AND PRACTICE OF OBSTETRICS. By W. TYLER SMITH, M.D. London: 1849.

(*Continued from p.* 478.)

We now propose to give as good an account as our space permits, of the applications to practice of the physiological doctrines formerly unfolded. If we have any difficulty in doing this, it is because this practical application is not limited to any particular part of the practice of midwifery, but extends over the whole of this department of medicine. There is scarcely a point in Obstetrics in which the study of the motor powers concerned in impregnation, gestation, parturition, and lactation, will not prove of service to the practitioner.

We have been much struck, while perusing the lectures chiefly devoted to physiological topics, with the number of practical hints on all that relates to functional disorders of the reproductive system in the female. Much of the treatment of impotence and sterility in the female must depend upon the just comprehension of the motor acts of coitus and conception, which we have clearly described. We use the word impotence as applied to the female, for Dr. Tyler Smith shows that the distinct orgasm exists in the healthy female. When the orgasm is imperfect, or altogether wanting, impotence is the result, but the subject of this affection is not therefore necessarily sterile. The woman may be impotent as regards the orgasm of coitus, but yet the spermatozoids of an insensible coitus may reach the ovulum, and be followed by impregnation and conception. It is well known that women in a state of trance, and also when unconscious from drugs, have become pregnant from connection during their insensibility. A highly interesting case, by Professor Rokitansky, of Vienna, will be found recorded at p. 673 of this Number. It presents an example of a converse condition to that just referred to, the sexual orgasm being present, and continuing in old age, while the individual was incapable of menstruation or conception, from non-development of the ovaries and Fallopian tubes.

The first practical subject treated of by the author is ABORTION, to the cause and treatment of which, the Ninth and Tenth Lectures are entirely devoted. In these lectures, Dr. Smith is not content with saying, "this disease of the ovum produces abortion; that emotion of the mind causes miscarriage; a diarrhœa, or a gastric disturbance brings about the premature expulsion of the ovum." He dives more intimately into the action of causes of this kind, and traces the actual routes by which these causes of abortion reach the uterus, and excite it to the premature contraction which expels its contents. He sets out by declaring, that there are only two great classes of ordinary causes of abortion; namely, those which depend on irritation of the extremities of excitor nerves, and those which depend on irritation of the spinal centre. Of these, the EXCENTRIC or REFLEX causes of Abortion are first studied. They consist of irritation of the mammary, trifacial, vesical, ovarian, erectal, vaginal, and uterine nerves. Of these reflex causes of abortion, we believe one of them, the mammary, had not been observed by any previous author. It is nevertheless of very considerable importance.

"Cases occur in which, during prolonged lactation, two or three conceptions and abortions follow each other, the latter being caused by the irritation of constant suckling. The question naturally suggests itself,—whether it is not the constitutional debility, rather than the local irritation, which induces abortion in these cases; and there can be no doubt that this, like many other anæmic conditions, may help to produce the accident. There is, however, over and above this, mammary irritation as a distinct cause. I have observed cases in which, owing to the synergic action between the uterus and the breasts, the secretion of milk had been almost entirely arrested by conception —the infant being chiefly supported by feeding. The child would still suck most vigorously, in its attempts to obtain milk, until the uterus was excited

to the expulsion of the ovum ; and after the abortion has occurred, the secretion of milk returns abundantly. Such cases are very different from those in which the breasts are dried up from debility. If the synergic relations between the mammæ and the uterus required any more obvious proof, I might refer to cases on record, in which actual metritis has been caused by the application of sinapisms to the breasts in amenorrhœa. It is important to recognize mammary irritation as a cause of abortion in the early months, because it may be mistaken for a copious menstruation ; and the woman, misled by the subsequent profusion of milk, may allow of its recurrence, and so suffer considerable constitutional injury." (pp. 127-8.)

Our readers should bear in mind the real signification of a *reflex* cause of abortion, and not be content with the mere word. This is laid down in the strongest terms in the following passage, which applies not only to reflex abortive actions, but to other pathological reflex actions of the pregnant, parturient, and puerperal states :—" One point I would insist on most emphatically, namely, that in cases of vesical irritation, or rectal irritation, we cannot correctly talk of the extension of nervous irritation from these organs to the uterus, by structural contiguity and continuity, or because they are supplied by nerves from the same source. Vascular phenomena may so extend from one organ to another in the same vicinity, but nervi-motor phenomena never can do so. There are abundant vascular anastomoses to account for such extensions of vascular phenomena, but there are no anastomoses of the nervous fibrils. However close the irritation may be to the motor organ, all the motor action which does not depend upon irritation of the muscular fibre, or upon sensation or emotion, is reflex in its form. The uterine contractions of abortion caused by irritation of the rectum and bladder—nay, even of the uterus itself—is as truly reflex and spinal as the uterine contractions excited by trifacial, gastric, or mammary irritation. I insist on this point, because I frequently observe relaters of cases speaking of motor sympathies between the bladder, uterus, and rectum, as though there were some short cut between these organs, whereas there is no motor connexion or route whatever, except it be *through* the spinal centre, and by way of the excitor and motor nerves. In all there is the excitor nerve, the spinal centre, and the reflex motor nerve concerned ; at one end of the nervous arc there is the physical irritation, at the other, the motor contraction." (p. 133.)

Dr. Tyler Smith has entered more fully than any previous writer into the connexion of Ovarian Irritation with abortion. He considers that throughout the whole of pregnancy, in women of the abortive habit or diathesis, the ovarian periods or classes of pregnancy, reckoning from the last catamenial flow, should be watched with great care. It was with a view to direct special attention to these periods, that Dr. Smith first constructed his periodoscope, though the instrument was subsequently extended so as to form a complete calendar of all the periodic phenomena of sex, whether in the impregnated or unimpregnated states.[1] Under this head, Dr. Smith directs attention to a peculiar and important form of abortion, commonly mistaken for sterility ; in which the ovulum, being impregnated, is expelled at once, instead of being allowed to form its normal attachment to the uterus. Ovarian irritation is the common cause of this premature expulsion. Thus, many cases of dysmenorrhœa in married females, are really cases of frequent abortion at this early date ; and the treatment is that of obstinate dysmenorrhœa.

The Centric or Direct causes of abortion—those which excite the expulsive uterine actions by irritating the Spinal Centre—are, Toxæmic states of the blood, and Emotion. These two causes—the one *physical*, the other *psychical*—affect the spinal centre as directly as though this organ were irritated by a scalpel in an experiment. The due appreciation of the causes of abortion is of immense importance in the prevention of this accident. Dr. Smith goes over, in a careful manner, the various modes in which all the causes

[1] London Journal of Medicine, January 1849, p. 81.

already referred to, can be kept in check by the removal of all the reflex and direct irritations of the nervi-motor system, to which gestation is liable. We quote a passage respecting the use of the plug, as conveying a useful practical hint, before we pass on to the consideration of other subjects.

"I have already referred to the use of the plug or tampon, sometimes necessary in threatened abortion with hæmorrhage, in cases where we still hope to save the ovum. The plug should not be so large as to stimulate the vaginal surface excessively, and it should be fairly introduced into the upper and roomy part of the passage, so as not to irritate the ostium vaginæ; at the same time there should be nothing like hard pressure on the os and cervix uteri. Whenever the presence of the tampon, carefully applied, permanently increases the periodic pains felt in threatened abortion, it should at once be withdrawn, unless we have resolved to abandon the ovum to its fate." (p. 143.)

Hitherto, the only idea connected with the use of the plug has been the mechanical suppression of hæmorrhage; but it is evident at once, that it must also act as an excitant of reflex action, so that, used empirically, it might do and undo at the same time. Some excellent practical comments are made upon the question, "When should we relinquish all hope of saving the ovum?" When this hope has passed, Dr. Smith recommends a purgative enema as the best and most certain mode of exciting the uterus to throw off its contents. When the abortion is inevitable, it is necessary, for the sake of the mother, to assist in its completion as soon as possible. We have ourselves witnessed cases in which the purgative enema, as recommended by Dr. Smith, has had the best and most instantaneous results.

Of the Management of Natural Labour we need say little. The rules for keeping labour natural, and preventing the occurrence of difficulties and complications, flow spontaneously from a comprehensive knowledge of the physiology of this process. On this head we need only refer to the work itself, and to our former notice.

After the subject of Natural Labour, Dr. Smith gives in his Thirteenth Lecture, a minute account of the Pathology and Treatment of Congenital Asphyxia. Dr. W. Hale has shown, that the first respiration of the new-born infant is excited by reflex action, from impression on the surface of the body at birth; and he has also shown that in the process of asphyxiation in young animals, certain gasping respiratory movements occur which are excited, not reflexly, but by the influence of venous blood upon the medulla oblongata. Proceeding from these points, Dr. Smith gives good reason for believing that in the majority of cases of labour, but particularly when this process is severe and protracted in its latter stages, the child is born in a state of partial asphyxia, from the contractions of the uterus upon the fœtal breathing organ, the placenta, and pressure upon the umbilical vessels. The asphyxiation in cases of breech presentation is of course more advanced at the time of birth. Under these circumstances, the child, if born alive, is born with these gasping movements, which become mixed with the reflex movements of respiration, until natural respiration be established. Very often the child passes through these respiratory movements of asphyxia, before the head has emerged through the vagina; in which case the child dies almost inevitably, unless these centric movements can be made subservient to respiration. That is, unless the mouth and nostrils of the child, but particularly the latter, can be supplied with air, either by opening the vagina with the fingers, depressing the chin of the child, or conveying an inspiring tube to its mouth. There can be no doubt that the study of the early respiratory movements of the fœtus must contribute largely to the saving of fœtal life. Our space does not permit us to give quotations from this part of the work; but we strongly advise the perusal of the whole of the present lecture, which is rich in practical directions for the management of infants born in a state of partial or entire

asphyxia. The whole armamentus supplied by a knowledge of the reflex function is applied in a simple and convincing manner.

We now approach the most important practical portion of the work before us, namely, that in which the physiological doctrines, contained in the earlier lectures, are applied to the treatment of the numerous accidents and complications of childbirth and the puerperal state. Hitherto, the applications of the *mechanisms* of parturition to practice, have been most minutely considered, to the almost total neglect of the more important *motor actions*, which both in health and disease are the ruling powers. The Fourteenth Lecture contains a sketch of these applications; it is here shown, that many of the most imminent dangers met with by the accoucheur depend upon excess or perversion, and upon deficiency of those nervi-motor actions which have been previously considered. Dr. Smith observes:—"We may divide the Motor Derangements of Labour into two classes.

"Class I. 1. Abortion. 2. Precipitate Labour. 3. Rigidity of the Os Uteri. 4. Rupture of the Uterus. 5. Laceration of the Perinæum, etc. 6. Excessive After-Pains. 7. Encysted Placenta. 8. Inversion of the Uterus. 9. Hour-Glass Contraction. 10. Metastatic Pains. 11. Puerperal Convulsions.

"Class II. 1. Uterine Inertia. 2. Tardy Labour. 3. Sinking. 4. Uterine Hæmorrhage. 5. Placenta Prævia. 6. Retained Placenta. 7. Labour with Paralysis."

The remaining lectures are occupied with the practical development of this synopsis.

In the Fifteenth Lecture, we have an exposition of the Causes of Excessive Motor-action, under the heads of emotion, voluntary effort, ovarian irritation, position of the patient, size of the child, size of the pelvis, digitation by the accoucheur, etc.; followed by the modes in which the excitability of the utero-spinal nervous system, may be most readily reduced. This reduction consists in the proper management of all obstetric manipulations; the regulation of motion and volition; the maintenance of the supine position; bloodletting in severe cases; nauseating doses of antimony; with the employment of other subsidiary measures which are pointed out.

The observations respecting manipulation, and the principles upon which it should be conducted, are so admirable, that we quote the following passage relative to this very important point: "'Taking a pain,' as it is termed, is necessary to ascertain the state of the parturient canal, particularly the os uteri, and to ascertain the presentation and mechanism of the individual labour. Beyond this, the manipulations frequently resorted to, have no precise intention, except it be to satisfy the mind of the patient and her friends, and impress them with the belief that the accoucheur is rendering assistance during the pains,—a belief generally without foundation. No principle has been recognized in making examinations, nor any distinction made between the effects of frequent digitation, in cases where laceration or other dangers are impending from excessive action, and others from which peril is incurred from inertia. I believe that, in the present practice of midwifery, particularly among young accoucheurs, manipulation is more frequently resorted to in acute than in tardy labours. There is a natural anxiety not to have seemed to fail in rendering assistance in those cases in which the most instant of the accidents of midwifery occur; and hence the fingers are almost constantly within, or at the mouth of the vagina." (pp. 220-221.)

The following extract relates to the distinction between the mere sensation of pain, and parturient motor power. It is a simple, but comprehensive idea, one that should be seized by the mind of every sound obstetrician,—that the uterus may be excited to tremendous motor action by an examination which gives no pain; that the uterus may even be ruptured by a violent contraction of the organ itself, which yields no extraordinary suffering until the rent has actually occurred: "The term excitation, in its application to spinal patho-

logy, has a peculiar meaning, very different from sensation or irritation. It may be said that sensation belongs to the cerebral, irritation to the vascular, and excitation to the true spinal system. It cannot be too much dwelt upon, that there is no relation whatever between pain and spinal action, whether pathological or physiological. This one idea alone, when it comes to pervade the whole obstetric art, will, I have no doubt, effect a great change in the practice of midwifery. When any considerable augmentation of the vis nervosa occurs in the spinal system, moderate stimulation frequently excites stronger reflex actions than actual violence would do. In the case of the stomach, we see the act of vomiting more readily excited by tickling the fauces with a feather, than by ruder measures. The part which is the excitor of vomiting, may even be ulcerated without exciting this act; so likewise will gentle manipulation of the os uteri, under certain circumstances, produce more excessive motor actions than mechanical violence, or even rupture of the organ. This important fact, so capable of salutary application, has never been more than faintly recognised. The stimulability of the spinal system requires special study with reference to these points; but no advance could be made without a knowledge of the principle of reflex spinal action. Wanting this principle, I believe the practice of 'taking pains,' even in the most careful manner, has caused nearly as many accidents as the ruder forms of malpraxis. The uterus has been ruptured by the uterine action excited by 'taking a pain,' and a fatal convulsion has been caused by even the cautious introduction of the hand into the uterus." (pp. 223-224.)

The Sixteenth Lecture treats of Rupture of the Uterus, and Laceration of the Perinæum. Dr. Smith believes the former to be generally caused, not, as is supposed, by pressure and mechanical violence, but by excessive uterine action. He teaches, that the uterus is not commonly burst open by the advancing fœtus, or crushed between the fœtal head and the bony pelvis; but that it tears and rends itself by its own contractions. This view of the subject is supported by a great number of facts; and there can be no doubt, in the main, of its correctness. Dr. Smith believes that, in cases of labour in which the labour is protracted, the contractions of the uterus produce a softened state of the muscular tissue, which predisposes it to laceration. He compares the uterus, under such circumstances, to the muscles of a hunted animal, or of the heart after inordinate action. The common rule in cases of arachnoid laceration of the uterus, is to expedite delivery by artificial means. Against this Dr. Smith protests most strongly; showing, by a reference to cases, that this accident very frequently occurs at the very moment of taking a pain, or of some other manipulative interference. The true preventive treatment, in these cases, consists in the reduction of the excitability of the utero-spinal nerves, and the avoidance of all excitor causes which are not inevitable to the particular labour. The child must pass through the parturient canal; but we must be careful not to increase the irritation it causes in this transit by any stimulus we may ourselves supply. Of laceration of the perinæum, we will only say, that most other authors recommend pressure on the perinæum as a preventive of the accident. Dr. Smith looks upon this pressure as a frequent *cause*; and, what is more, supplies the explanation. Irritation of the ostium vaginæ excites the reflex action of the uterus in increased force, and thus bursts open the perinæum before it has become sufficiently dilated. There can be no doubt of the truth of this. In the common practice, the perinæum is supported (? irritated) in acute labours; while it is left alone in tardy labours, when it might be useful. We quite join with the author in his description of the absurd position of the accoucheur doomed to squeeze the sphincter ani for hours together.

Dr. Smith's remarks on the prevention of laceration are full of practical value: "Where there is the apprehension of this accident, the indication throughout is to moderate the motor action, so as to give time for the gradual dilatation of the os externum. To fulfil this, the examinations should be as seldom

as may be consistent with proper attention to other points, such as ascertaining the presentation, and making those changes in the position of the presenting part which may be required. Great care should be taken to preserve the membranes entire until the os uteri is fully dilated; it is even beneficial if they should remain unbroken, so as to act with fluid pressure on the perinæum. Besides attention to these points, the rectum, the bladder, and the stomach, should be kept from irritation, lest these organs should become excitors of unnecessary parturient action. Volition and emotion require to be cautiously regulated; as both voluntary emotional motor efforts frequently produce laceration. The best mode of preventing this is to encourage the patient to cry out, the open state of the glottis taking off the pressure, and rendering voluntary and emotional efforts alike impossible. Emotional motor action may often be thus neutralized by exciting a voluntary cry; but sometimes emotion is so powerful as to defy this control; the woman, in a state of desperation almost amounting to rage, makes the most tremendous efforts at expulsion: in such cases, Denman states that he has obtained a respite by suddenly telling her that the child was actually born!" (pp. 241-2.)

The Seventeenth Lecture is occupied with RIGIDITY OF THE OS UTERI, ENCYSTED PLACENTA, HOUR-GLASS CONTRACTION, INVERSION OF THE UTERUS, AND AFTER-PAINS.

The following philosophical *resumé* gives the pathological relations of these accidents in a few words:—"The resemblance between rigidity of the os uteri and the most simple form of encysted placenta—namely, sphincteric closure of the os uteri with retention of the placenta—is at once obvious. The same contracted state of the os uteri is present in inversion, after the uterus has descended through the os uteri. In the form of encysted placenta, or irregular action of the uterus, constituting hour-glass contraction, we have precisely the same condition of the middle portion of the uterus as that which obtains in the second stage of inversiouteri. In simple hour-glass contraction, the cavity of the uterus is divided into two parts by the contraction of the middle portion of the organ; but when, owing to irregular action of the fundus, this part of the organ descends into the cavity of the uterus, and the hour-glass contraction then occurs, the fundus uteri is seized by the contracting ring of the uterus, borne down through the os uteri and vagina, and inversion is thus rendered complete. After the inversion, the os uteri, which dilates to allow the inverted uterus to pass, becomes firmly contracted. Again: all these abnormal actions, occurring after delivery, are but modifications of excessive after-pains. In severe after-pains, it is easy to feel with the hand that the uterus becomes hard and prominent at particular points, and soft and depressed at others. From these irregular contractions the more serious irregularities of uterine action arise. Sphincteric closure of the os uteri prematurely, is the most simple derangement; next comes the annular contraction of the upper part of the cervix, or the body of the uterus, in hour-glass contraction; and lastly, the phenomena of inversion, which is the most compound of all these disordered actions. Thus rigidity of the os uteri, encysted placenta, inversion of the uterus, hour-glass contractions, and excessive after-pains, are merely modifications of irregular uterine action, and they are all convertible one into the other." (pp. 253-4.)

We had intended to bring this notice to a close on the present occasion: but we find that, although a very few pages would contain the remainder of our observations, the necessary space could not be so well afforded in the present, as in the succeeding number—in which we shall conclude our analysis of Dr. Smith's admirable work.

[*To be concluded in next number.*]

USE OF ALCOHOLIC LIQUORS IN HEALTH AND DISEASE. By JOHN CHADWICK, M.D. pp. 123. London: 1849.

That the GIN-PALACES and BEER-SHOPS are the curse of England, few medical men are ignorant; for it falls to their lot, more than to that of any other class, to see them in their true character, as the sources of three-fourths of all the crime, disease, disloyalty, and pauperism so rife among us. We do not think, however, that pledged abstinence from alcoholic liquors by a large section of the respectable portion of the community, is more than an Utopian dream of the philanthropist; nor do we think that contending for "total abstinence" doctrines can issue in much practical good. On the other hand, were the question to be largely agitated as one of "Financial Reform," as well as of Moral Regeneration, the makers of gin, beer, and whisky, would be driven from their intrenchments: though they are immensely powerful in the magistracy, and in the legislature, they are not beyond the reach of public opinion. Remember the Corn Laws. We feel assured, that were the energies of a Cobden directed to this reform, it would in a few years cease to be the policy and the reproach of the British Government, to encourage drunkenness.

We assent to much contained in Dr. Chadwick's work; but we think that his facts and arguments only tell against the abuse, and not against the use, of alcoholic liquors. We also think, that by taking up the extreme view of the question, he has lost sight of more practicable reforms. Still, we are inclined to hope, that the extensive perusal of his work may do good: it may lead some to avoid as excessive and destructive, what they now ignorantly conceive to be moderate and innocent indulgences.

Doctors, too, in their consultations on STERILITY, (now apparently so common among the wealthy), might do well to try, as their first prescription, abstinence from alcoholic drinks, and all provocative diet. Dr. Chadwick quotes the following passage from Dr. Trotter's book on the Nervous Temperament. "A few years ago, I was consulted by some particular friends, of great affluence, on the bad health of their wives, who, to the regret of all, had never been in that happy way

"Which ladies wish to be, who love their lords."

These ladies, after being married for several years, without having children —devotees of fashionable life, and a prey to painful nervous affections—are now the mothers of healthy boys and girls, and enjoy the best health imaginable. All these happy changes were effected by little assistance from medical prescription; they were brought about by reversed modes of living." Diet and regimen we believe to be (if properly directed) quite capable of enabling many women deemed barren, to have offspring. It is an improved mode of living which makes women fruitful in our colonies of Canada and Australia, who never were, and never hoped to be, mothers in this country.

CRITICAL DIGEST OF THE BRITISH AND FOREIGN MEDICAL JOURNALS.

PRACTICE OF MEDICINE AND PATHOLOGY.

MR. WHITE COOPER ON PROTRUSION OF THE EYES, IN CONNEXION WITH ANÆMIA, PALPITATION, AND GOITRE.

The attention of Mr. White Cooper having been attracted by the communication in the *Edinburgh Monthly Journal* for February last, on "Anæmia and its Consequences", by Dr. Begbie,[1] he has offered his views on the subject through the *Lancet*. Mr. C. has seen five examples of the disease in question; and two of the patients had had a course of mercury for the supposed hydrophthalmia. The following is Mr. Cooper's valuable paper, with some slight curtailment.

The attention of the profession was, I believe, first directed to this combination of morbid changes by Sir Henry Marsh, and has since been commented on by Dr. Graves, Dr. Stokes, Dr. Macdonnell, and more recently by Dr. Begbie; but in each instance the condition of the eyeball has been alluded to as a secondary symptom, which indeed it must in strictness be considered. As, however, it occasionally happens that it is regarded by the patient and the medical attendant as a disease *sui generis*, and is treated as such, my intention is to refer more particularly to its symptoms, appearances, and peculiarities.

Case I. A lady, twenty-four years of age, had enjoyed good health, although of delicate frame, until she was twenty-one. At that time her health became impaired by affliction. Palpitation distressed her greatly; and for this, frequent leeching in the præcordial region was had recourse to, with temporary relief. After the palpitation had existed about six months, she perceived an enlargement of the thyroid gland, and at the expiration of another six months, an alteration in the aspect of her eyes was noticed by her friends, although she was unconscious of it herself. At this time she suffered much from headache, singing in the ears, and depression of spirits. The bowels were constipated; the catamenia, at first irregular, became suppressed, and at the monthly periods she suffered much from increased pain in the head, flushing of the face, and hysterical attacks. Such was her condition when she came under my care in February 1845. There was then marked prominence of the eyes; but when the lids were closed, the globes could be pushed back into the orbits by gentle pressure. On careful examination, no change of structure or unhealthy condition of the eyes themselves could be detected. There was neither hardness of the globes, tenderness on pressure, discolouration of the sclerotic, nor was there the slightest impairment of vision. There had never been any pain, muscæ, nor scintillations. The complexion of this young lady was chlorotic, and her countenance indicated languor and mental depression. Pulse 110, small, but sharp and thrilling. Enlargement of the thyroid gland, especially of the right lobe, was evident. The stethoscope discovered a bruit, synchronous with the systole of the ventricles, in the præcordial region, and the peculiar sound, indicative of anæmia, was heard in the veins of the neck. After careful consideration, it appeared that the symptoms were in connexion with anæmia, rather than the result of organic disease. She was directed to take the effervescing draught, with carbonate of iron, (hereafter referred to,) twice daily; to regulate the bowels with pills

[1] Vide London Journal of Medicine, March 1849, p. 273.

of aloes and myrrh; to use a tepid salt-water bath in the morning, followed by friction of the person, nutritious diet, and as much fresh air as possible; the eyes to be frequently bathed with cold water. Three months elapsed before I saw her again, when a marked improvement was visible. She had gained flesh, the eyes were decidedly less prominent, and the catamenia had just reappeared; the pulse 80, and firmer; the systolic bruit and venous murmur greatly diminished, and the palpitations less. The liquor oxysulphatis ferri was now prescribed thrice a day, the bowels to be regulated by Marienbad water, with occasional doses of aloes and myrrh. This treatment, modified from time to time, was continued for eighteen months; and when the patient took leave of me, the prominence of the eyes had disappeared, the thyroid gland was considerably lessened in bulk, the sounds and action of the heart were natural, and the general health restored.

Case II. Margaret H——, aged twenty-five, of chlorotic aspect, became a patient of mine at the North London Eye Infirmary in May 1845. She applied on account of the remarks to which an unusual prominence of the eyes subjected her. She stated that her health had always been delicate; that during the last three years she had been subject to violent palpitation and intense headache. She was not aware of any prominence in her eyes until about two years before that period. She had consulted two medical men: one thought there was a tumour behind the globes; the other regarded the case as true hydrophthalmia, and subjected her to a course of mercury, which made her mouth very sore, weakened her greatly, but did no good to the eyes. At sixteen, menstruation had commenced, and continued regularly until she was nineteen, when it became suddenly arrested, from her having caught a severe cold: it had not returned. Severe pain in the head, giddiness and throbbing on assuming the erect posture, dyspepsia, loss of appetite, and cold extremities, were complained of, together with occasional hysterical attacks; pulse 108, and feeble; a soft systolic murmur was heard extending into the carotid and subclavian arteries, and in the neck the anæmic murmur. The whole of the thyroid gland was enlarged, though not to any great extent.

The eyes protruded considerably, but were free from hardness, and readily retreated into the sockets under gentle pressure. The sclerotic was of a natural hue, the movements of the iris active, and the sight perfectly good; the upper lids were dusky, and somewhat drooping. There had never been either pain or muscæ. For nine months, she was treated with iron in various forms and combinations, hyoscyamus, aloes, and myrrh, friction to the surface and spine, cold to the eyes, and nutritious diet. The amendment was gradual, but steady; and when she left town, the eyes had nearly recovered their natural aspect, the catamenia were restored, and her general health greatly improved.

Case III. A young gentleman, aged 17, was brought to me on the 12th of November, 1846. He did not appear more than fourteen, and his voice was piping. From infancy he had been delicate, and since twelve years old had been subject to palpitation, especially after exercise; this had increased, with violent throbbing, aching in the head, and singing in the ears. His sleep was disturbed by frightful dreams; appetite bad; and he showed a disinclination to the slightest effort, bodily or mental. About eighteen months before I saw him, the eyes began to assume an increased prominence. The case was considered dropsy of the globe, and treated by a course of mercury; at the

expiration of which the eyes were more prominent, and the general health more impaired. I was unable to detect any morbid change. The sight was perfect, and there never had been pain or uneasiness in them. Enlargement of the thyroid gland being visible, the preceding cases occurred to me. He stated that the enlargement had come on about the same time that the eyes began to protrude. On examining the heart, a powerful impulse was perceptible, and a loud murmur heard, synchronous with the systole of the ventricles. On the following day a consultation was held with an eminent physician, and we agreed in opinion that there was no organic disease in the heart, but that the undue action was referrible to irritability, and the bruit to anæmia. A belladonna plaster was applied to the præcordium, and a mixture containing hyoscyamus, with camphor mixture and cascarilla, prescribed. This was followed by preparations of iron, cold salt-and-water sponging, and friction. A nutritious diet was enjoined. He returned to the south of England at the expiration of a month, and from time to time communicated with me. Five months elapsed before I saw him again, and a marked improvement in all the symptoms had taken place. The effervescing iron draught had been taken for two months; it was exchanged for the citrate, which disagreeing, was followed by the liq. oxysulphatis, which suited him admirably. Soon after his return home after his second interview with me, not being satisfied with moderate horse-exercise, but keeping hunters, he must needs follow the hounds, and a recurrence of the irritability of the heart was speedily excited. A third time I saw him, and insisted on rigid attention to the rules laid down. At the end of twelve months he had grown two inches in height, his form had become developed, the prominence of his eyes had disappeared, the thyroid gland had decreased, and although the heart was still irritable, the bruit had ceased, and the sounds were natural.

Case iv. Miss W——, aged nineteen, consulted me, October 9th, 1848. Her countenance was pale; lips and conjunctivæ bloodless; manner languid; and the short peculiar cough so characteristic of hysteria frequently heard. Her eyes projected in a marked manner, although not to the extent visible in the other cases. On the lids being closed, and gentle pressure applied, the globes receded into the orbits. Her vision was perfect, and there were no symptoms, objective or subjective, of congestion or morbid action in the eyes. There was general enlargement of the thyroid gland, producing what is called 'a full throat.' The bruit of anæmia was heard in the neck, and in the præcordial region; the pulse 110, small, and jerking. This lady suffered exceedingly from headaches, the bowels were constipated, and there was total loss of appetite, with coldness of the extremities. The catamenia had appeared at fourteen years of age, but had always been scanty and irregular. She was frequently troubled with hysterical attacks, and neuralgic pains in various parts of the body.

The treatment pursued has been the regulation of the bowels by the pill of aloes and iron; the effervescing iron draught, with calumba, twice daily; friction to the spine, and salt-water ablution. Under this treatment there is every prospect of perfect recovery.

Case v. R. B——, aged twenty-nine, is at present under my care. She is of dwarfish stature, weak constitution, and her health has always been indifferent. "She menstruated early, but has never been regular. About twelve years ago she began to suffer from intense headaches and palpitation, brought on by the slightest exertion. The eyes gradually became protruded, and have so continued. There is considerable enlargement of the right and middle lobes of the thyroid glands; anæmic murmur in the neck and heart." Such was the account when she came under my care, nine months ago; but under treatment similar to that pursued in the other cases, general amendment has taken place, and the projection of the eyes is decidedly less.

Remarks. These cases, in the majority of instances, are examples of simple

protrusion of the eyes, and not of dropsical enlargement of the globes. True hydrophthalmia is characterized by the following symptoms: viz., pain in the eye, gradually increasing in severity; impairment of vision, usually terminating in amaurosis; sluggishness of the pupil; a dusky-bluish hue of the sclerotic; and a stony hardness of the globe. When we consider the tough unyielding structure of the sclerotic, it is hardly conceivable that such an increase in the fluid contents of the globe should take place as to cause positive and visible enlargement, without pain or uneasiness, without muscæ or scintillations, or without the slightest dimness of vision. Again, when we reflect how delicately the refractive media are adjusted one to the other, and how, in old age, a very trifling diminution in the fluid contents of the globe gives rise to marked alteration in the focus of vision, it is difficult to conceive that a large increase of the fluid contents of the eye should not cause any impairment of sight. Of the cases described by Dr. M'Donnell, speaking of the first, he says, "The eyeballs were observed to become much increased in size, and to have assumed a peculiar wild and staring appearance. This alteration, though quite apparent to himself and his family, was unaccompanied by any pain, dimness of vision, or other inconvenience." Of case 2 it is remarked, "The eyesight is very good, though the eyeballs are remarkably prominent, and are unnaturally staring." Of case 3, "In the progress of the disease, the eyeballs became so much enlarged (?) and protruded as to render it impossible to close the eyelids; yet from the beginning she likewise remained free from dimness of vision, or ophthalmia." Of case 4, "For some years past, the eyes had been undergoing a gradual process of enlargement, which both she and her friends were quite aware of, but as her sight remained unimpaired, and she suffered no uneasiness in them, this alteration did not occupy much of her attention." In the three cases described by Dr. Begbie, the condition of the sight is only alluded to in one, and here there was "no dimness of vision." It is, however, proper to state, that in two of the cases the patients complained of distension and uneasiness in the eyeballs, and there would seem to have been some distension of the globe; but in not one of the five cases which have fallen under my observation, could symptoms of hydrophthalmia be detected, and in all, the sight was perfectly good.

The conclusion appears to be, that in the majority of the cases of prominent eyes occurring in anæmic subjects in combination with palpitation and enlargement of the thyroid gland, *the increase in size of the eyeballs is only apparent, and the globes are simply protruded.* In some instances there may be dropsy, but these are the exceptions, and are characterized by pain and distention in the eyes, discoloration of the sclerotic, and hardness of the globes. It is sometimes difficult, even for practised ophthalmic surgeons, to state positively whether the eyes be actually enlarged or merely protruded; but a careful inquiry into the symptoms will most likely lead to a correct conclusion.

Mr. Dalrymple has suggested the following explanation of the phenomenon. The prominence of the eyes is probably due to the operation of two causes: an absence of the proper tonicity of the muscles by which the eyes are retained in their natural positions in the orbit; and some amount of venous congestion of the tissues forming the cushion behind the globes. Such congestions we know to be common in connexion with a feeble condition of the circulating system; but in the cases seen by Mr. Dalrymple, as well as in those in my own practice, the congestion seemed to be confined to the soft contents of the orbit, and not to extend to the eyeballs. That some of the muscles may be in a relaxed, and others in a morbidly excited condition, was well shown in one of the cases under the care of that gentleman, where the eyes, being greatly protruded, were nearly denuded of the protection of the upper lid by a constant and powerful spasm of the levator palpebræ superioris, which drew the lid so far upwards and backwards, that much of the sclerotic above the cornea was visible. This spasm of the levator of the lid is not

uncommon in nervous and hysterical females, and is frequently associated with other irregular muscular actions, as in chorea. The expression given to the countenance by this protrusion of the globes, and the unnaturally elevated lid, is very peculiar, and the aspect is that of the wildest terror.

Treatment. In a case of apparent enlargement of the globes, it would be proper, before deciding on the treatment, to ascertain the condition of the heart, the circulation, and the thyroid gland. If there be indications of anæmia, as the bruit in the veins of the neck—if there exist palpitation, and, in addition, enlargement of the thyroic gland, there will be strong evidence in favour of the condition of the eyes being secondary; and this view will be strengthened if the patient make no complaint of pain or imperfection of vision. The most efficacious remedies are, iron, aloes, and myrrh, with sedatives, ablution of the body with cold salt-and-water, followed by friction, and if there be indications of hysteria, friction along the spine with a stimulating liniment. It is desirable from time to time to change the form of the medicines. Three preparations of iron possess peculiar efficacy in anæmia. They agree when the ordinary preparations disagree, and seldom cause pain in the head or febrile disturbance. The following is the most energetic:—Sesquicarbonate of soda, one drachm; tincture of calumba, one drachm; distilled water, an ounce and a half; tincture of the sesquichloride of iron, one drachm. Mix, for a draught, to be taken twice a day. The decomposition which arises causes the precipitation of carbonate and peroxide of iron; whilst chloride of sodium remains in solution, and carbonic acid is given off. When taken, a grateful warmth is usually felt at the stomach, followed by a general glow. The tincture of calumba may or may not be added. It is indicated where there is loss of appetite. This formula, I may remark, is valuable in neuralgia. The preparation next in power is the liquor oxysulphatis ferri, the formula for which is to be found in the *Pharmaceutical Journal* for May, 1842. It is a persulphate of iron, with free nitric acid. From three to twelve drops may be given twice or thrice daily, in water, or infusion of quassia. The third preparation is the tincture of the acetate of iron of the Dublin Pharmacopœia—a mild and very elegant form. Instead, however, of commencing with half-drachm doses, as recommended by some authors, it is better to begin with fifteen drops, and gradually increase the dose. When there is constipation, the aloes and iron pill of the Edinburgh Pharmacopœia is an useful auxiliary to the other medicines. As a general rule, the best time for taking ferruginous preparations is soon after a meal. During the progress of digestion, the assimilative organs are in a state of high activity; and the iron, mingling with the chyme, is introduced into the system with less disturbance and greater effect, than when taken on an empty stomach. A small dose, thus administered, will produce a more powerful effect than double the quantity given when the alimentary canal is in a state of languor. If the iron be taken after breakfast, cocoa should be recommended in preference to tea. The only topical application necessary, is cold water to the eyes twice or thrice a day. Patients are often dissatisfied if something be not recommended; and the bracing effect of the cold appears to be of service in restoring the deficient tone to the weakened parts. [Abridged from the *Lancet* of 26th May, 1849.]

MENINGEAL APOPLEXY IN THE BRAIN OF AN INFANT THREE DAYS OLD.

Dr. Heslop exhibited, at the Birmingham Pathological Society, on the 1st of March 1849, the brain of an infant who died suddenly three days after birth. The mother had been admitted into the General Hospital, under the care of Dr. Evans, as a case of dropsy. Labour came on a few days after admission. The child presented in the first position of Nægelè. From great narrowing of the passages, the second stage of labour was prolonged; but the child breathed and cried vigorously the moment it was born. There was one circumstance worthy of note about the mother's previous condition, namely,

her urine was moderately albuminous. The brain was highly congested; and there was considerable extravasation of blood in the substance of the pia mater. This was particularly observed on the inferior surface of the cerebellum, and in the tuber annulare. The arachnoid cavity contained a large quantity of sanguinolent fluid.—*Prov. Med. and Surg. Journal.*

The occurrence of Meningeal Apoplexy is more common *at*, than *after*, birth. For remarks and statistical details connected with the ages at which Apoplexy occurs, we refer to Dr. R. Quain's valuable memoir, pp. 27-42 of this volume, and particularly to p. 33.

DR. VIGLA ON APROSOPIA, OR CONGENITAL ABSENCE OF THE FACE.

Dr. Vigla, of Paris, has published the following memoir in the *Archives Générales de Médecine* for 1849. We translate the paper entire, omitting only a few unimportant sentences.

Aprosopia seems the most suitable term by which to designate that form of monstrosity in which the face is wanting. Three cephalic organs are necessarily absent in such cases, viz., the buccal, the nasal, and the ocular; the auditory apparatus is present when there is great deficiency of the cranium and encepalon. Isidore Geoffroy-Saint-Hilaire, in his *Histoire des Anom. de l'Organization*, t. ii, p. 430 (1836), describes these monsters under the name of *triocephalia*, being the fifth genus of his family, otocephalia. His father established the genus under the designation of *triencephalia*. Both terms are intended to indicate the absence of three cephalic organs.

"The word Aprosopia has already been adopted by Dugés,[1] Beclard,[2] Laroche,[3] and others; also, more recently, by Otto, in his great work on teratology. It is as follows, that the latter gives the character of faceless monsters: "Class 1, Monstra Deficientia; Ord. 1, M. Perœcephalia: Gen. 4, M. Aprosopa. The face is either entirely wanting, or is very deficient; so, likewise, are the anterior and middle lobes of the brain, or, in the place of them, we may find a liquid. The anterior cerebral nerves are either wanting, or irregular. The third, fourth, fifth, and sixth cranial vertebræ are absent, or perhaps three of them only are wanting; and the third cranial vertebræ resembles what we see in cyclopic monsters. The ears are either united, or in too close proximity to each other. The neck presents a pouch, projecting like a bird's crop,—such as we see in checkless monsters, to which faceless monsters have many points of resemblance. When the face is imperfect (*microprosopa*), the greater the deficiency in the external parts is, the more altered, or defective, are the brain and anterior nerves."[4]

Aprosopia is very common in the inferior animals, but so rare in man, that Isidore Geoffroy-Saint-Hilaire, writing in 1836, remarked, that he had not seen a case of the kind; nor had he, in the annals of science, been able to discover any authentic instances. Last year, I received a human monster of this description. The dissection was carefully made by me, kindly aided by the counsel and cooperation of MM. Rayer, Blandin, and Gosselin. I am indebted to Dr. Bell, one of the Faculty Librarians, for referring me to a case published by Dr. Otto, which is the only case in the human subject, in addition to my own, with which I am acquainted. Both cases present a complete analogy to the Aprosopia of animals, which is so well known.

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[1] Dugés. Observations de Monopsie, et d'Aprosopie. (Revue Méd. t. iv, p. 827), p. 419.

[2] Beclard. Mémoire sur les Acephales, Bul. de la Fac., t. iv. 1844.

[3] Laroche. Essai d'Anatomie Pathologique sur les monstruosités de la face: thése de Paris, 1833.

[4] Otto (Adolpho-Guilelmo). Sexcentorum Monstrorum Descriptio Anatomica. Vratislaviæ: 1841.

Case 1. The following case is from Dr. Otto's work, *Monstra Aprosopa and Microprosopa*, p. 54. The subject was a full-term female fœtus, recently born, and was well formed, excepting in the head, which was very deformed and imperfect, having only a very small cranial base, and wanting the cranial arch and the face. In truth, the brain and the osseous arch of the cranium had almost entirely disappeared, from hydrocephalus; so that the upper part of the head was merely a small cerebral tumour, such as is seen in hemicephalous monsters, having for its only covering a membrane which was thin, transparent, ruddy, bloody, and wrinkled. At the apex of this tumour there was a narrow opening in what resembled a cicatrix, through which a probe could be easily passed into the cerebral matter. There was another and a larger aperture, like a tear, on the posterior surface, which seemed to communicate with the medulla oblongata. The posterior and lateral parts of the heads were covered with an abundant hairy scalp. The face was entirely wanting; but, nevertheless, there existed a small wart-like excrescence in a narrow canal, suggesting, by its form, the idea of a trumpet, or rudimentary nose. Beyond this fleshy mass were two sufficiently well-developed ears, which, though united, had each an opening by a separate cutaneous flap. The neck was short and lank; it did not exhibit any tumour, such as is often met with in the necks of monsters of this class.

Dissection. The anterior part of the brain was found to be entirely deficient: the first six pairs of nerves were wanting; and those which existed were lank. The cerebellum was in its right place. The posterior tear, formerly mentioned, was found to communicate with the much dilated fourth ventricle. The vertebral canal was absent anteriorly, but posteriorly it was developed in excess. At the upper part of the neck there was a sac filled with mucus, and constituting the back part of the throat: in it were found both Eustachian orifices, a little tongue with its hyoid bone, a well-formed larynx, and the œsophageal opening. In the thoracic cavity was seen the thymus gland greatly developed, the left lobe extending to the diaphragm. The most striking circumstance in the disposition of the thoracic and abdominal viscera was, that those which ought to have been on the right side were on the left, and *vice versâ*: the left lung had three lobes, and the right only two: the heart also was on the right side of the body. The venæ cavæ emptied themselves into the left, and the pulmonary veins into the right auricle. The aorta arose from the right ventricle, and after describing its arch, descended along the right side of the vertebræ; whereas the pulmonary artery arose from the left ventricle. The disposition of the abdominal viscera was analogous: as was that of the vessels and nerves of both cavities. These organs were not malformed, excepting the right supra-renal capsule, which was very small and elongated. The left supra-renal capsule was wanting. The cranium was smaller than any I ever saw in a newly born infant: its longitudinal diameter, measured from the occipital ridge to the canal was hardly an inch; its depth, one inch and two lines; and the transverse diameter one inch and three quarters: hence the cavity of the cranium was not so long as it was deep and broad. The basilar process, and both occipital condyles were well formed; but the squamous portion was short, sharply inclined forwards, and perforated in the middle by a hole, through which issued a cerebral hernia. The parietal bones were very small and formed a perpendicular anterior wall to the cranium: their posterior margin (here become superior) formed the anterior boundary of the aperture whence issued the hernia. Between the two parietal bones, there was a bone shaped like a hollow cone, which seemed to be a rudimentary frontal bone, the two portions of which, though joined, were easily distinguished. Beyond this imperfect frontal bone were two temporal bones, intimately united, and having a single tympanic cavity; in this were two mallei, two incudes joined together, and two separate stapes.

Case II. The fœtus which forms the subject of the following history, was born at about seven and a half months, the mother being a young primipara, of good constitution, and slightly lymphatic temperament. The pregnancy seemed natural; and the premature delivery might be owing to an excessive quantity of liquor amnii. This condition was easily distinguished from the commencement of the labour by the bulk of the abdomen, and the peculiar sensation communicated to the finger in vaginal exploration. The membranes were resisting and thick, and till they were ruptured, labour went on slowly. The placenta and umbilical cord seemed natural. The fœtus, which was of the female sex, during the few minutes it lived, performed irregular respiratory movements. Seeing the manifest dilatation of the chest, and the alternate rise and fall of the abdomen, I did not suspect—what dissection revealed—that there was no opening by which air could enter the chest. The pulsations of the heart were slow, feeble, and irregular. Pinching of the skin excited slight movements of the limbs. These various phenomena being regarded by the father as signs of life, he performed baptism. The external aspect of the fœtus was natural in shape and plumpness, except in the head and neck, which joined with one another in such a way, as to make it difficult to say, where the one terminated, and the other commenced. The cranial portion of the head only was present: it was covered with thick black hair, flattened from behind forward, greater in its transverse than in its antero-posterior diameter. The presence or absence of hair was the best external guide, by which the respective limits of the head and neck could be determined. At their point of junction, and at the extremities of the transverse diameter, there were two very large ears, placed obliquely, but sufficiently well formed. At an equal distance from each ear, and in the mesial line, there was a slightly projecting and arch-like fold of skin: it bore a considerable resemblance to a very small rudimentary superior eye-lid, upon which one could distinguish with a magnifying-glass, or even with the naked eye, yellow points, suggesting, by their arrangement in longitudinal striæ, that they were the Meibomian glands. When this cutaneous appendix was pressed between the fingers, it communicated the sensation of being something analogous to tarsal cartilage. Beyond this cutaneous fold the skin was red, and appeared as if excoriated and deprived of its epidermis on a surface as large as that of the eye-lid, being a little less than a centimètre at the middle, and somewhat more at the two sides, which became elongated like drops, the right side more than the left. Examination by the touch, and by the magnifying-glass, demonstrated that the excoriation was only apparent; and that what had this appearance was more like mucous membrane. Beyond what has been described, there was nothing which could be regarded as rudimentary facial organs. Under the skin of the neck could be felt a movable larynx.

Dissection. *Abdomen.* There was meconium in the intestines. There were two small supra-renal capsules. Fat was abundant. The viscera were natural as to their position, shape, and bulk. *Thorax.* The thymus body presented nothing remarkable in volume and texture. The lungs, heart, and great vessels, were natural. *Neck and Pharyngeal Cavity.* Air, or fluid, injected into the inferior end of the œsophagus, returned by the trachea, and *vice versâ*. If opposition were made to the return of what was thrown in by either passage, the skin of the upper part and the neck was raised, and the rudimentary eyelid became prominent; but no air or fluid escaped by the palpebral sulcus, or by the auditory foramina. By this experiment was proved the existence of a pharyngeal cavity having no external outlet. The pharynx, larynx, and adjacent structures, having been detached without disturbing the osseous parts at the base of the cranium, the following observations were made after the pharynx had been longitudinally laid open. The larynx and the superior lateral and the inferior portions of the pharynx were small, but well formed: the anterior wall—and this is the striking fact—was quite

closed, and did not open into the mouth. This anterior wall was truly the anterior half of the tongue, raised up perpendicularly, and continuous superiorly with the pharynx to which it closely adhered, although the limits of each were well defined. The V, formed by the lingual papillæ and the other peculiarities of organization, apparent on the surface of the tongue, were easily recognized. At the upper part of each lateral wall of the pharynx, there was an obliquely-placed oval opening, communicating with the middle ear : they were obviously the orifices of the Eustachian tubes. At the lower part, and between the two folds of the mucous membrane, there was a conglomeration of minute glands, and of the pillars of the arch of the palate : of the palate itself there was no trace. The muscular portion of the larynx, pharynx, and tongue, was not less developed than their mucous membrane. The hyoid bone and its appendages, as well as the epiglottis and laryngeal cartilages, were perfect. The anterior portion of the tongue was wanting. There was apparently no trace of the mouth or nasal fossæ. *Contents of the Cranium and Vertebral Canal.* The encephalon was remarkable for its small size. The medulla oblongata, pons varolii, and cerebellum, were more developed than the brain, which consisted of a single lobe, destitute of convolutions and median fissure. There was a considerable quantity of fluid between the encephalon and its membranes. Within the cerebral lobe, there was a single cavity, with smooth sides, large in proportion to the solid mass, and communicating freely with the fourth ventricle, which presented a more complete degree of organization. The encephalic substance, especially the brain proper, was very soft, so that the anatomical examination was difficult: it had not been possible to treat it previously by alcohol. The olfactory and optic nerves were wanting. The three branches of the fifth pair were well developed. We thought that we recognized the sixth pair, but what we saw may possibly have been the third or fourth. However that may be, it is certain that only one of these three pairs of nerves existed. The facial, auditory, pneumogastric, glosso-pharyngeal, spinal, and hypoglossal nerves, could be traced to their exit from the cranium. The spinal marrow, and nerves arising therefrom, were regular in their development, and natural in their size, as estimated by the volume of the organs to which they were distributed. *Skeleton of the Head.* The bony wall of the cranium, completed by membranes, completely enveloped the encephalon : the fontanelles were extremely small ; and that one which naturally exists at that age, at the union of the frontal with the parietal bones, was almost entirely wanting. The bones of the base of the skull were united by means of membranes. The occipital bone was one of those most developed, especially in the portion above the protuberance ; it presented a degree of enlargement contrasting with the flatness of the frontal, and which, at first sight, caused it to be taken for the latter. It was formed of six distinct, but intimately united pieces. The occipital foramen and protuberance, and the anterior condyloid foramina, were perfectly developed. The frontal bone was atrophied to such an extent, that its size was not a third of that of the occipital ; it was formed of a single piece. The vertical portion was flattened, of a triangular form : the greatest border was placed inferiorly, and the angles were rounded. The horizontal part, reduced to a thin edge, presented a rudimentary orbitar ridge, situated on the median line. This was reduced to a small navicular fossa, measuring fifteen millimetres in its transverse, and five in its antero-posterior diameter. The other points observed in the complete configuration of the frontal were in vain sought for ; and there was no indication of the primitive separation of the bone into two symmetrical portions. The development of the parietal bones was in proportion to that of the occipital. The sphenoid bone was well formed in its posterior part, at its junction with the occipital : anteriorly, an irregular tubercle completed, with the posterior portion, an imperfect sella turcica, and was articulated with the frontal, without the intervention of an ethmoid. The greater wings were present, but unsymmetrical, irregularly

and coarsely marked, and had distinct articulations with the frontal, parietal, and temporal bones. There were no lesser wings, nor pterygoid processes. There was no discoverable rudiment of an ethmoid bone. The temporal bone was the most developed; but its development was not equal in all parts of the bone. 1. In the squamous portion, the zygnmatic process was absent, and was represented only by a small bony tubercle. The glenoid cavity was also wanting. 2. The mastoid portion was complete, though small. 3. The petrous portion was as well developed as is ordinary in a well-formed fœtus; and this bore a relation to the size of the auditory nerve, and the state of the external auditory apparatus. The structure of the internal ear was not examined; but it probably would have presented no irregularity. There was a small styloid process.

The skull, examined as a whole, departed little from the normal condition in its posterior portions, but was very imperfect in its anterior fourth, owing to the absence of the ethmoid and lesser wings of the sphenoid, and the incomplete state of the frontal and greater wings of the sphenoid. The face was completely wanting, and with it the bones which exclusively belong to it,—the superior maxillary, palate, malar, nasal, and lachrymal bones, the inferior turbinated bones, the vomer, and the inferior maxillary bone. It would, perhaps, be proper to regard the ethmoid, which was absent, as a bone of the face rather than of the cranium. With regard to the bones which specially belong to the cranium, we find that the parietal and occipital bones alone do not form any part of the face; they belong exclusively to the cranium, and hence were better developed. The others were imperfect, in proportion as they formed part of the skeleton of the face; and the analysis of this case gives aid, by a natural process, in distinguishing the cranial from the facial portion of the skeleton of the head.

TREATMENT OF CHOLERA IN THE PARISIAN HOSPITALS.

In our last number, p. 569, we gave a detailed account of the treatment of Cholera pursued in seven of the Parisian hospitals; we now give the following in continuation.

Salpetrière. The severity of Cholera in this institution, together with other circumstances, invest the treatment there employed with a high degree of interest. Its population is one *sui generis*, being composed entirely of men; they are either old men, or infirm subjects, labouring under chronic diseases or epilepsy, or insane persons, all being in a most unfavourable state of health; and the great number of inmates, amounting to 5000, tends to favour the progress of disease. These untoward circumstances have been, however, in some degree neutralized by the healthy arrangements of the institution, especially in the new parts of the building, and by the ability of the medical staff. The Salpêtrière being in a healthy situation, cannot be considered as in itself favourable to the spread of an epidemic.

The treatment mostly consists of excitants, astringents, and narcotics; and Cholera is mostly considered as a disease *sui generis*, exhibiting special causes, indications, and alterations, and demanding a special treatment.

M. Natalis Guillot employed, at the commencement of the epidemic, calefacients and excitants, hot air baths, tea punch, aromatic infusions, etc. He has since renounced this method, not because it did not seem good and based on rational principles, but in the hope of finding a better if possible. The following are the modes of treatment which he has successively adopted.

1. The treatment which M. Guillot has most frequently employed, consists of laudanized rice, cataplasms to the abdomen, enemata with diascordium or rhatany, and hot air baths, in the algide cases. This treatment has seemed to him sufficient in ordinary cases. Sometimes he has confined himself to a more simple treatment, consisting of cataplasms to the abdomen, and enemata

of marshmallow-water. But in the more severe cases he has found it necessary to have recourse to more active treatment, the nature of which is as follows.

2. Hot air baths; stimulating mixture, composed of julep, 125 grammes; sulphite of ammonia, 2 grammes; a spoonful every ten minutes. An injection, containing a quart of marshmallow-water with a gramme of sulphite of ammonia, to be injected every half-hour; or a large enema, with 4 grammes of sulphite of ammonia, to be forcibly injected into the intestine every hour. Cataplasms are in all cases applied to the abdomen. M. Guillot says that the sulphite of ammonia has seemed to him highly beneficial, both in arresting diarrhœa, and in acting as a powerful diaphoretic, like acetate of ammonia. He was led to employ this remedy, from the reflection that, if Cholera be produced by a sort of fermentation, the sulphite of ammonia, which has the property of arresting ordinary fermentation, even in very small quantities, should exert some influence on Cholera. This idea was communicated to him by M. Pelouze.

3. M. Guillot has also, from the commencement of the epidemic, employed the preparations of mercury. He administers, every ten minutes, half a centigramme of calomel, with two grammes of sugar. Generally when this has been continued about two hours, the gums become affected; and as soon as this is observed, the calomel is omitted. In this way, the patients sometimes take as much as four grammes of calomel in a few hours. Gum or rice water constitutes the remainder of the treatment. The most constant effect of this method, is the almost immediate arrest of the diarrhœa, without the necessity of having recourse to injections; and M. Guillot has obtained good effects from it in some apparently hopeless cases. It appears to him successful only in young persons; and to have no effect on the aged. Intense salivation has only occurred in persons aged upwards of forty years. M. Guillot has also employed smaller doses of mercury; the effect has been slow, but the action of the calomel, although less powerful, has been beneficial. This treatment is not new, but borrowed from the English physicians, and especially from Annesley, who employed it largely in 1831. M. Guillot has also resorted, in some cases, to mercurial enemata, composed of a gramme of mercurial ointment rubbed up with marshmallow water. These enemata have produced excellent effects on the diarrhœa.

General bleeding, or local depletion from the anus or epigastrium, cupping to the abdomen, or behind the ears, have been sometimes employed, but only as adjuvants, in plethoric and robust persons, and in cases of cerebral congestion. Baths have appeared very useful; but more so at the commencement of reaction than in the algide stage. Baths with mustard have been employed in the latter; but without good effect. Soap-baths have been commonly employed at the commencement of reaction.

M. Guillot is of opinion, that no one method of treatment can be laid down, in a general manner, for Cholera; but certain apparently distinct classes of methods appear to produce the same beneficial results. Thus all his modes of treatment, however varied, have always been employed with the object of restoring warmth to the patients, promoting reaction, and arresting diarrhœa and vomiting. Careful watching of the patient is most important; and if the medical attendant could be constantly present, it might be possible to seize the most favourable opportunities of modifying the treatment. Thus, depletion from the anus, or from a vein, made precisely at the time of reappearance of the pulse, have appeared to produce excellent effects in some cases, in which, a short time before, one has scarcely cared to prescribe it. Cases of diarrhœa which have obstinately resisted treatment by rhatany injections, have yielded almost instantaneously to enemata of mercurial ointment; and *vice versâ*. Some patients who had been treated with rice ptisan and laudanum, have received marked benefit from the substitution of Seltzer water with gooseberry syrup; and others, who have experienced no good effect from medicines, have obtained a sudden amelioration by being plunged into

a bath. The efficacy, then, of the treatment of Cholera, laying aside the extreme severity of some cases, appears to M. Guillot to depend chiefly on the perspicacity of the physician, and on the ideas which may be suggested to him at the bed-side of the patient. In general, the successful cases have become more numerous since the commencement of the epidemic. The progress of the disease is even slower than that of convalescence.

A few observations remain to be made on the attempts to treat Cholera on homœopathic principles. At the commencement of the epidemic, when the severity and mortality of the cases were very considerable, the administration of the hospitals, under the direction of the Minister of the Interior, consulted a commission of physicians on the opportunity of making some trials of homœopathic treatment. The commission replied, that homœopathy did not constitute a special art; that, consequently, they had not to defend nor to prescribe the use of medicines in any particular doses; and, that any treatment might be employed, and any medicines administered, and in any doses, which appeared proper. M. Guillot thought it his duty, under the severity of the circumstances, to make a trial of homœopathy. Acting on his own responsibility, he placed under the care of a homœopathic practitioner, seven of the most desperate cases, which appeared likely to receive no benefit from the ordinary modes of treatment. To these seven patients were administered, on the same day, arsenic, nux vomica, carbon, and bryony, at the twentieth degree of dilution. The next day they had all died. The experiments were pushed no further. They tended to show, on the one hand, the inefficacy of the homœopathic treatment; and on the other, the liberality with which it would have been adopted if found successful. M. Guillot acknowledges, with pleasure, the zeal and devotion with which his homœopathic colleague attended to his experiments.

M. Guillot has also employed hachisch and chloroform; but the results have not been satisfactory enough to warrant their continued use.

M. Barth employs three forms of treatment, either separately or simultaneously, according as certain phenomena of the disease exclusively predominate, or are simultaneous and of equal intensity with others.

1. For vomiting and diarrhœa, whether in the simple or prodromic form of the latter, or in the proper evacuations of cholera, M. Barth at first almost exclusively employed astringents and opiates, if the symptoms presented little severity. His treatment consisted of opiate enemata, and rice ptisan, with syrup of quinces and laudanum. But having soon discovered the inefficacy of this treatment, he has since adopted the use of nitrate of silver, administered in mixtures to arrest the vomiting, and in enemata to restrain the alvine evacuations. In the first case, he has given nitrate of silver in the proportion of 5 centigrammes to 125 grammes of distilled water: in the second, he prescribes enemata containing from 15 to 20 centigrammes of nitrate of silver in distilled water. He has observed, that the nitrate of silver was generally well borne when administered internally, except in some cases in which the patients rejected the medicine immediately, each time it was administered. In the greater number of cases it promptly arrested the vomiting. The enemata have appeared to produce no inconvenience; and he has, by their means, almost always succeeded in arresting the diarrhœa, if not on the first, on the second day; and it has rarely been found requisite to continue them beyond this period. He now almost constantly employs these injections, to the exclusion of opiate enemata, both in cholerine and in confirmed Cholera. Efficacious as this treatment has appeared, it is proper to mention that it by no means secures the patient from a relapse. Among other cases, in illustration, may be mentioned that of a woman who was a third time attacked with copious diarrhœa, after having been twice treated by the above method.

2. In the algide stage, M. Barth has successively employed two methods,

which appeared to him capable of acting in a special manner on the state of the blood. These means are, hachisch and salines. He has administered hachisch in the form of alcoholic extract, in doses of 15 centigrammes, rubbed up with yelk of egg. Salines have been given in mixture, containing 15 grammes of common salt, 30 grammes of syrup of poppies, and 30 grammes of mint-water; and in enemata, containing 15 grammes of salt dissolved in water.

3. To excite re-action and the perspiratory function, M. Barth prescribes the following diaphoretic mixture:— mint-water, 30 grammes, spirits of balm, 30 grammes; acetate of ammonia, from 10 to 15 grammes; syrup of orange-peel, 15 grammes; ether, a few drops.

In the period of reaction, M. Barth employs, according to the indication, one or more bleedings, and cutaneous revulsives.

M. Falret, after having tried, at the commencement of the epidemic, the methods commonly employed, such as punch, ice, mustard baths, etc., without marked success, now has recourse to the same method he employed in 1832, at the Salpêtrière, and at the Grenier-d'Abondance in conjunction with M. Rostan.

In cholerine, as well as in the prodromic period of Cholera, when the symptoms are slight, M. Falret confines his treatment to rice water or aromatic infusions with laudanum, and starch enemata. When the disease is more pronounced, he prescribes opiate injections. If these means fail in arresting the diarrhœa, he employs rhatany injections; and if it be still obstinate, he administers enemata containing 15 centigrammes of nitrate of silver, which seldom fail. In cases where the diarrhœa is, from the commencement, of great intensity, he at once has recourse to this method. When the diarrhœa is accompanied by nausea, he adds to the preceding remedies some of the potion of Rivière. If the disease manifest itself with a certain degree of intensity, he judges it necessary to employ perturbative means; he then prescribes an emetic of ipecacuanha. He endeavours also to restore warmth to the patients, if they have begun to become cold, and employs sanguineous depletion if there be symptoms of local congestion. M. Falret has sometimes employed calomel to the amount of 7 or 8 grammes, in doses of from 35 to 40 centogrammes (from 5½ to 6 grains), and emollient cataplasms to the abdomen. This latter remedy, of which the good effects have been established by other practitioners as well as M. Falret, when the abdomen is the seat of more or less intense pain, has been replaced advantageously, in some cases, by the application of a copper vessel, such as forms part of the fumigating apparatus of hospitals, filled with hot water. This vessel, drawn over the abdomen and placed alternately on the painful parts, has been found of great efficacy in allaying the pains and that painful sensation of epigastric constriction which the patients so often experience. In confirmed cholera, M. Falret employs the same, or rather analogous means, but in a more active and persevering manner. These remedies consist of sinapisms moved over the body; mustard baths; sometimes bottles of hot water moved all over the body, and even on the neck, so as to act as near as possible to the nervous centres; friction, either dry or with alcoholic and aromatic liniments; and ethereal potions, or stimulating mixtures containing from 15 to 20 grammes of acetate of ammonia, and from 20 to 25 drops of laudanum. He also sometimes employs other means, proper for certain special indications. For example, in the organic stage, he sometimes practises depletion to 1 or 2 ounces twice or three times in the day. When the potion of Rivière fails in allaying vomiting, he has recourse to a solution containing 5 centigrammes of nitrate of silver. In obstinate vomiting, ammoniacal blisters have succeeded better than the remedies just mentioned. To allay the diarrhœa, he employs rhatany injections; and, in the most obstinate cases, injections of nitrate of silver. Cramps have been treated by dry frictions, sinapisms, and

by the applications of compresses wetted with chloroform and left on the part for twenty minutes. The latter remedy has sometimes caused the prompt cessation of the cramps. On two occasions, M. Falret has tried the sesquichloride of carbon at the commencement of the algide stage : it appeared very beneficial in one case, that of a young insane person. Reaction took place under the influence of this medicine with great rapidity. In the period of reaction, general and local depletion, to the anus, or near the head, has been employed with some advantage. Wine of quinine has been given as a tonic during the period of convalescence, and the diet has been cautiously regulated. M. Falret considers copious sweats as the most common of the critical phenomena ; and he has observed them to be in direct relation to the quantity of opium administered; they have been especially abundant after the administration of laudanum. As regards drink, M. Falret is of opinion that it should be very hot at first, but as soon as thirst becomes intense and there is repeated vomiting, he substitutes ice and Seltzer water.

M. Falret has noticed a circumstance, which might be of some value if it were equally remarked in the other wards containing insane persons,—that, in his division the greatest proportion of the patients are those affected with melancholy and depression ; those who habitually, and with more or less obstinacy, refuse food ; and those who have been a considerable time in the establishment.

M. Mitivié. The prodromic period is considered by M. Mitivié as one of great importance. Hence he has greater confidence in the remedies employed at this period, to combat the premonitory diarrhœa, and the saburral state, cephalalgia, vertigo, *courbature,* etc. His most usual remedies, in such cases, are emetics, or rather, emeto-cathartics ; he gives ipecacuanha, followed by Seidlitz water ; or rather, if the saburral state be strongly marked, an emeto-cathartic of tartar-emetic with sulphate of soda. In some cases, he has followed this by a bleeding. This practice has appeared to him sometimes successful in arresting the premonitory symptoms, and preventing them from degenerating into severe Cholera.

In confirmed Cholera, when the patients are cold, M. Mitivié employs the ordinary calefacient means : hot air baths, bottles of hot water, bags of hot sand, etc.; dry frictions, or frictions with turpentine, camphorated brandy, ammoniacal liniment, or dry or aromatic vapours. Sinapisms are applied to the extremities, both as calefacients and as derivatives; and, at the same time, they allay cramps. These are also treated with emollient and laudanized fomentations, and have been sometimes made to cease by the local application of chloroform. In one case, the foot of the patient had been wrapped in linen cloths dipped in chloroform ; the cramps soon ceased ; but the patient retained an icy sensation in his foot, with numbness and feeling of weight. The next day, the foot was swollen, red, and painful. These symptoms have disappeared under the use of emollient applications; but there is still some loss of sensation. Diarrhœa has been treated by enemata of starch and laudanum, with decoction of rhatany, ptisan of rice water, rhatany mixtures, pills of opium, or gummy extract of opium in some julep. In vomiting, M. Mitivié commonly employs Seltzer water, aromatic drinks being most frequently rejected by the patients. Three or four times he has tried the infusion of stachys, but the patients have not been able to retain it. He attends to the feelings of the patients, who generally prefer cold to hot drinks ; hence he gives them Seltzer or Vichy water, acidulated water, or even ice. Some individuals have a desire for strongly acidulated drinks; and one patient recovered, without having had any other remedy than citrons to suck. The feeling of anxiety at the epigastrium is treated by sinapisms and an opiate plaster. M. Mitivié has tried water impregnated with salt, but soon renounced it, finding it inefficacious and difficult of administration.

The patients are so disgusted with and opposed to it, that they not only refuse it, but any other drink which may be offered to them. For the same reason, he has for the most part renounced the use of ammoniacal or laudanized drinks, for which he now generally substitutes Seltzer or Vichy water, or water impregnated with citron. In the period of reaction, M. Mitivié has sometimes employed, with apparent success, leeches and general bleeding, especially when the symptoms of reaction have been intense, with threatening of cerebral congestion. But this treatment has not seemed to him equally successful when reaction has produced coma, delirium, and injection of the conjunctivæ. He has in this case sometimes given emetocathartics, but not with such marked success as in the prodromic period.

M. Lélut. The treatment employed by M. Lélut consists of diffusible stimulants, to promote reaction, and of astringents, to restrain the alvine evacuations. After administering a hot air bath, or a water bath at a temperature of from 108° to 120° Fahr., if the patient be cold, M. Lélut prescribes tea, or hot aromatic infusions with acetate of ammonia; and when reaction has commenced, he supports it by coffee or champagne. Opium is administered only occasionally and in small doses, and only when it is indicated by severe cramps and pains, for fear of cerebral accidents. To allay the diarrhœa, M. Lélut at first used rhatany enemata; but this not answering his expectations, he has adopted the use of injections of nitrate of silver; and he now employs this remedy at the commencement of the disease, as well as in confirmed Cholera, with general good effect. When the patient is in danger of asphyxia, M. Lélut employs small bleedings. At the same time, he has tried the effect of mixtures and enemata containing salt; but it is difficult to say whether they have had any good effect. In the period of reaction, he employs copious depletion, repeated as often as is indicated by congestive or comatose symptoms. At the commencement of the disease, M. Lélut has sometimes had recourse to an emetic, consisting of a gramme of ipecacuanha and five centigrammes of tartar emetic. This remedy has appeared especially indicated when the patients, being in the cold stage, have been tormented with nausea and with ineffectual efforts to vomit. He excludes purgatives, considering them to be indicated at no period of the disease.

M. Trélat at first employed the ordinary external calefacient means; and has since tried other modes of treatment, such as emetics and the mercurial method. But having found none of these to answer his expectations, he has returned to the stimulant method, to which he has determined to adhere. The most common stimulants which he employs, are white wines, especially champagne, which he prescribes in general for all his patients, either concurrently with, or after the administration of hot stimulant and diffusible drinks.

M. Baillarger employed, at the commencement of the epidemic, tea-punch, a mixture containing acetate of ammonia, mint water, alcohol, and ether; laudanized enemata; and externally, sinapisms, and frictions along the vertebral column with camphorated brandy. Almost all the patients thus treated at the commencement of the epidemic, perished, generally in from eight to ten hours. Having observed unexpected good effects from the saline treatment in a melancholic patient, forty-five years of age, he has since employed it, to the exclusion of the stimulant method. He omits the enema, and gives a mixture containing 12 grammes of chloride of sodium, 125 grammes of mint water, and 40 grammes of syrup of poppies. With this he employs strongly laudanized enemata, frictions along the vertebral column, and sinapisms. This treatment has been successful in some very severe cases, and has appeared to have the advantage of bringing about a moderate reaction. This mixture is never continued beyond one day; but it is often suspended sooner if reaction be established. He afterwards gives Seltzer water,

small quantities of ice, etc. In some cases, blisters to the epigastrium have been found very useful in allaying the sense of oppression, which often forms one of the most distressing symptoms. When comatose symptoms supervene, (which appear in general so gradually as to allow time for treatment,) M. Baillarger prefers successive abstraction of blood, by means of leeches, to the application of a large number at once. At the same time, he prescribes blister to the inner part of the thighs. M. Baillarger is of opinion that large sinapisms on the præcordial or epigastric regious, or on the limbs, should only be used with great caution, especially in young and nervous subjects. When once their action is produced, they produce, or appear to produce and maintain, extreme irritation. In a young girl of eighteen years of age, the vomiting continued for three days, in spite of the use of ice, Seltzer water, potion of Rivière, opium, and finally, a blister to the epigastrium. They yielded, as if by enchantment, to the use of trisnitrate of bismuth, in doses of half a gramme every half-hour (M. Monneret.) According to M. Baillarger, the good results observed have in part depended, in six or seven cases, on frictions along the vertebral column. He does not think that these frictions have been sufficiently employed.

M. Baillarger was one of the first who tried the effects of *stachys* or *teucrium;* and he is now among the few who persist in attributing any efficacy to it. He considers its action superior to that of indigenous stimulants, and different, inasmuch as it has the advantage of being astringent, as well as stimulant and diaphoretic. He has completely succeeded in rapidly checking the premonitory diarrhœa; and also diarrhœa which had for several days resisted opium and astringent ptisans. The most remarkable effect which M. Baillarger has observed to result from the administration of teucrium, is copious perspiration. This diaphoretic property of the teucrium, joined with its astringency, appears to him to constitute one of the chief advantages of this remedy. Having observed that the concentrated dose of teucrium was so bitter as to be disagreeable to the patients, and sometimes to induce vomiting, M. Baillarger has succeeded in determining the dose which can be most easily borne by the patients, and at the same time be efficacious. He gives 10 grammes of teucrium in a quart of sweetened ptisan.

M. Manec has employed external and internal stimulants, with the exception of baths and vapour douches. Among the diffusible stimulants, acetate of ammonia is that which has appeared to him to produce the best results; but he does not confine himself to this remedy. Considering Cholera to be engendered by electric influences, he administers sulphur in all possible forms,—in mixtures, in enemata, in friction, and in suppositories. In mixture, he gives from 60 to 80 grammes of flowers of sulphur, in 500 grammes of gum mixture, or some other vehicle. The enemata contain hyposulphate of soda. Frictions are made with sulphurated pommade; and suppositories of sulphur, with some substance of proper consistence, are placed in the rectum. In accordance with the same view, he places plates of glass under the feet of the bed, to isolate the patients. Since the 7th of April, when he commenced this plan, only one spontaneous case of Cholera has occurred in his wards. On the patients brought in, labouring under Cholera, this system appears to have no effect. In a case of intense cyanosis, he applied electricity, by Clark's apparatus, but without success.

ANOMALOUS STRUCTURE OF THE OVARIES.

Professor Rokitansky relates the following remarkable case of monstrosity of the internal generative organs. It affords an additional confirmation of the ovarian theory of menstruation, but seems to indicate that sexual instinct may exist independently of the development of these organs.

On the 26th of December, 1847, a judicial examination was made of the body

of a woman, aged 61 years, who had died suddenly. She had been twice married, and had never menstruated nor borne children, but was the subject of a sexual desire, which, even in advanced age, was a source of inconvenience to her. The autopsy revealed the following appearances. The body was of moderate size, corpulent, having altogether the conformation of that of a woman. The breasts were large, the external sexual organs largely developed, the labia pudendi and clitoris large, and the vagina capacious. The dura mater was infiltrated, and of a congested appearance: and the vascular points, seen on section of the brain, were, in some parts, as large as a hemp-seed, especially in the right hemisphere. A drachm of serum was contained in the ventricles. The lungs were congested and œdematous. There was hypertrophy of the left ventricle of the heart; the bicuspid and aortic valves were thickened and contracted, and both orifices were narrowed. The liver was bound down by adhesions, and the intestines and omentum had grown together; they were both congested. The spleen was flabby and small. In the stomach there was a quantity of chyme, and some brownish-yellow fæculent matter in the intestines. The kidneys were covered with much fat, and the bladder was contracted and empty. The mesentery contained fat.

The sexual organs presented an interesting appearance. The upper part of the pelvis had a tumour projecting into it, which was diagnosed to be a fibrous tumour of the uterus; and a vessel, resembling a vesicula seminalis, was observed passing up from the inguinal canal, on the lateral wall of the pelvis. It was visible through the peritonæum, which it raised into a small duplicature in the vicinity of the uterus; it had a narrow zigzag course. It appeared to be the anterior spermatic artery, forming an extended insular space on the right lateral wall of the pelvis, but entering, singly, into a vascular plexus, situated on the cornu of the uterus. With this vessel, there passed into the inguinal canal a delicate bundle of muscular fibres from the internal oblique muscle, a branch from the genito-crural nerve, the external spermatic nerve, and some aponeurotic fibres. On the cornua of the uterus there existed, covered with a process of peritonæum, folded several times on itself into the form of a slightly lobed pouch, a plexus of veins; and below, and to the external side of this, was an uneven, slightly lobed or glandular structure, resembling, at first sight, an ovary. On the right side also, within this plexus, there was anteriorly a small cylindrical sac, with a delicate envelope, about the size of a pea, moderately filled with fluid. Each of the ovariform bodies presented, on section, within a delicate fibrous envelope, a pale yellowish-white stroma, in which there lay some more or less round yellowish bodies, of about the size of a pea, and more defined than the stroma. When removed from the stroma, they appeared, both externally and on section, to be made up of a convolution of small vessels, serving to remind one of the seminal vessels: but further examination corrected this view. These bodies were easily resolved into larger or smaller portions, and could be unfolded with great ease, under water, into a striated membrane, partly formed of areolar fibres, partly structureless, which the naked eye could perceive to be covered with a network with large meshes, consisting merely of areolar fibres. There was no trace of canals, nor of adipose tissue; nor was there any trace of fat in the stroma. There was not the least appearance of Graafian follicles. The small sac above mentioned, contained a pretty clear yellowish fluid, in which, together with nucleated structures, some oblong and others elongated like a staff, there was found perfect ciliated epithelium. In the wall of the uterus, on the right side and posteriorly, there was situated a thick, fibrous tumour, of about the size of a man's fist, pushing the cavity of the uterus towards the left. The cavity was small; the cervix uteri and the vaginal portion were also rather small. There was no trace of an orifice of a Fallopian tube. The neck of the urinary bladder was surrounded with a ring of about one and a half line thick, of parenchymatous matter, which, on closer examination, was found to resemble the prostate in structure.

The nature of this singular irregularity of the sexual apparatus is self-evident. The muscular fibres from the internal oblique, entering with the spermatic artery, with the external spermatic nerve, as well as the rudimentary prostate, denoted the male type. The ovariform bodies were neither ovaries nor testicles. On the one hand, they presented some appearance of division into stroma and follicles; while, on the other hand, they presented a structure calling to mind that of an arrested testicle, while the cellular bodies contained in them might be considered as arrested or atrophied vesiculæ seminales. The small sac observed on the right side, with its ciliated epithelium, was evidently the rudiment of a Fallopian tube: it calls to mind the blind tubes found in imperfect development of the uterus.—[*Zeitschrift der K. K. Gesellschaft der Aerzte zu Wien*, 1849, p. 329.]

OBSTETRICS.

OVAL BOX-WOOD PESSARY IMPACTED WITHIN THE VAGINA FOR TWO YEARS; INGENIOUS METHOD OF ITS REMOVAL BY MEANS OF A JOINER'S GIMLET, AND FORCEPS.

Mr. Jesse Leach, of Heywood, Lancashire, has published the following instructive case. Mrs. W., aged 60, married, but without children, about two years ago consulted a practising empiric, for general debility and tenesmus during urination; for which he advised the use of a pessary, and prevailed upon her to allow him to introduce one, which he did with some difficulty. Her existing symptoms became subsequently much aggravated, with additional weight, heat, pain and uneasiness about the loins and vagina, with a constant dribbling away of urine. She applied again to her adviser, and requested him to remove the pessary. He tried to do so by adopting different expedients, but after fruitless efforts for the space of two hours, he gave up the task, and coolly assured her she need be under no apprehension, as the pessary in a short time would rot away, without the slightest injury to her. She still hoped that time would remove what her adviser could not. However, her general health became more alarming; and among other practitioners, she consulted my brother, Mr. R. H. Leach. He found a pessary so firmly wedged in the vagina that he could not remove it with his fingers.

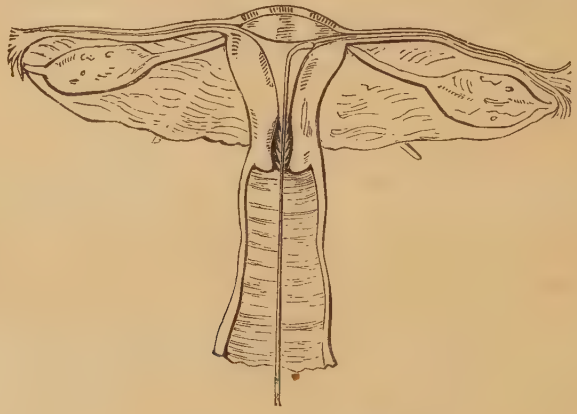
On the 1st of September 1848, I visited her with my brother. She had a care-worn countenance, was dejected in spirits, had cough, disordered digestion, incontinence of urine, much emaciation, and debility. The sphincter ani was paralysed. The mucous folds of the rectum were relaxed and much congested. The pessary could be distinctly felt through the rectum in the vagina. The perinæum was rigid, and thus, though I could move the pessary within the vagina, prevented extraction. The lower orifice of the vagina was very small. The woman was now placed upon her left side and her shoulders slightly elevated; the vagina was well lubricated with lard. Two fingers of the left hand were passed into the rectum behind the pessary and traction thereby made, whilst the index finger of the right hand, which was with difficulty passed within the vagina behind the pessary, acted as a second tractor. In this way the pessary could be brought to the lower part of the vagina, but the small outer orifice and rigid perinæum would not allow its broad diameter to pass. Scoops, a small vectis, and various other means were then tried without success. Perforation or crushing were now the only expedients. We thought it probable that the best perforator would be the joiner's gimlet; and as the pessary was hollow and made of box wood, perforating with a gimlet would most probably fracture the pessary and allow the segments to be removed by a forceps. My brother brought the pessary as low as he could by two fingers, introduced behind it within the rectum, and steadily held it fixed against the perineum and outer orifices of the vagina with his right hand, protecting the soft parts by means of a towel,

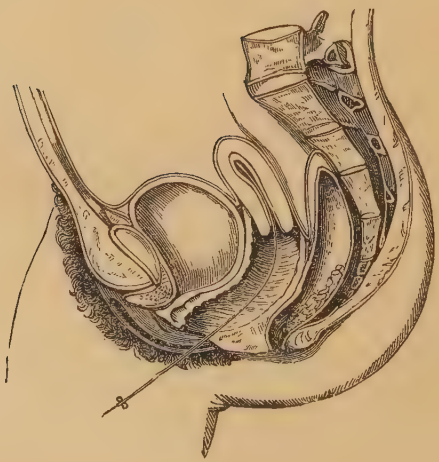
whilst I perforated it with a gimlet. On the groove of the gimlet, behind the worm, passing within the hollow of the pessary, its walls fractured into three segments, which were brought away with a forceps. Granulations had formed on the cervix uteri, and had passed within the opening usually left for a pessary tape; they were torn during extraction, and found within the hollow of the pessary. The woman did well.

I am not aware that the gimlet has been tried before in such a case; but it effectually answered my purpose.

DR. TYLER SMITH'S NEW METHOD OF TREATING STERILITY.

In our last number (p. 590) we laid before our readers Dr. Tyler Smith's Essay on *Removal of Obstructions from the Fallopian Tubes by Catheterism:* and we stated that we had seen the instrument introduced by Dr. Smith, with great facility, into the unopened uterus. We should also like to see *the operation performed on the dead body—the uterus being in situ;* and we think till this be done, and the catheter cut down upon, and found within the tube —both tube and uterus being uninjured—the preliminary objections of Dr. Tilt and others cannot be set aside. The practicability of the operation cannot be *demonstrated* on the living body. Dr. T. Smith has, since we last





wrote, made a second communication to the *Lancet* (June 9th, p. 604), from which we make the following extract:—"But we find in practice that in the great majority of cases of Sterility, there is a good state of health, the uterine secretion appears regularly, and there is neither appreciable pain nor disease in any of the reproductive organs. The mere absence of childbearing, all the conditions of fertility being apparently present, is the only symptom. This is, in fact, a reason why a vast number of cases never come under medical treatment at all. I submit, that in these cases of good health combined with sterility, the defect can only arise from some mechanical impediment, such as may be remedied by Fallopian catheterism. We sometimes see these cases, after years of barrenness, suddenly, and without any apparent cause, give way, and the subjects of them bear children. Such cases are, I have no doubt, cases of Fallopian impediment, relieved, at length, by accident, but which might have been remedied long before by art. In many cases, this form of sterility continues unrelieved, until after the decline of menstruation, when childbearing is impossible. I have no doubt I shall be able, hereafter, to publish numerous cases of success by my method. But sterility is not like blindness or deafness, in which the result of an operation is seen at once. Time is required, even after the removal of all impediment. At present, the time which has elapsed since I first performed the Fallopian operation upon sterile subjects, is not sufficient to show the results; but I have already had one case, in which, after several years of sterility, impregnation took place, but which was followed by abortion at the third month.

"The woodcuts before the reader give a front and a side view of the vagina, uterus, and Fallopian tube, with the instruments used in the operation, in situ. They convey a better idea of the operation than the former representation of the instruments alone."

ATMOSPHERIC PESSARIES.

Our continental neighbours are bent, as well as our friends beyond the Tweed, on rendering atmospheric air subservient to uterine manipulations. M. Garcil lately presented to the Academy of Sciences of Paris, a pessary made of caoutchouc, of about an inch in diameter, which, by insufflation, may be made to reach a diameter of three inches.—*Lancet.*

TOXICOLOGY.

DETECTION OF CHLOROFORM AND ETHER IN THE BLOOD.

To detect Chloroform, place an ounce of the blood to be examined, in a glass capsule, and warm it for some time on the water-bath. Cause the vapours to pass through an abducting tube, heated to redness in one point, and apply to the end of that tube, interiorly, a mixture of iodide of potassium and starch. Introduce, moreover, into the opening a strip of paper saturated with the same mixture. If, in consequence of the decomposition of Chloroform, chlorine is given off, there will be blue iodide of starch formed. So small a quantity as a ten-thousandth part of Chloroform can thus be discovered. The following process is used for Ether. Introduce the blood to be tested into a flask, with a large mouth, which will allow of being closed; by means of a string, suspend within the flask and above the blood some chromic acid, placed in a conical glass. Warm the liquid in the water-bath; the vapours of Ether, as they are given off, will be known by the brickish hue which they will give to the crystals of the chromic acid. Alcohol and carburetted hydrogen, however, act in the same manner upon chromic acid.—*Journal de Chimie Médicale,* as quoted in the *Lancet.*

REPORTS OF SOCIETIES AND ACADEMIES.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Tenth Meeting of Session 1848-49. April 10, 1849.

Dr. Addison, President, in the Chair.

On the Utility and Necessity of Performing Paracentesis Thoracis in certain Cases of Pneumo-Thorax. By Hamilton Roe, M.D., Physician to the Westminster Hospital, etc. The object of this paper was to show, that Pneumo-thorax is not a necessarily fatal disease, and that paracentesis is the best remedy which can be employed for its cure. The disease arises from a great variety of causes, and not unfrequently there is either little or no alteration of structure in the lungs. The author related two fatal cases, in which paracentesis was recommended by him, but not performed; and in which, after death, it was found that there was, in one instance, no perforation nor disease of the lung whatever; while in the other, the opening in the pleura was very small; and although four small caverns and a small number of tubercles of inconsiderable size existed in it, there was no organic disease immediately fatal, and life might have been at least prolonged, had the lung been relieved from the pressure of the air in the pleura by the operation of paracentesis. Several other writers have narrated similar cases, especially M. Saussier, who has shown that the possible causes of Pneumo-thorax are seventeen. The author himself arranged the varieties of cases under four heads: 1, those where the air is secreted by the pleura; 2, those where it arises from decomposition of fluid; 3, the cases where it escapes from a distended or ruptured emphysematous cell; and 4, those where it issues from a fissure in the lung. The first three varieties are susceptible of cure, and the fourth is not necessarily fatal. After describing the symptoms distinguishing these different varieties of the disease, the author proceeded to show that the mere presence of air in the pleura is not a source of danger; that it may in some cases be absorbed, and that it is therefore only where air is accumulated in such quantity, as to cause great difficulty of breathing, that we are called on to remove it by tapping the chest. The operation, in order to be successful, ought to be performed before the lung by compression has become carnified, and the other lung congested. The objection that the air admitted from without will itself compress the lung, is met by saying, "that if the wound made by the canula in tapping be kept open, the lung, if healthy, will expand on being relieved from pressure, and may, if the air can escape as fast as it enters, not only come into contact with the costal pleura, but contract adhesion to it, and obliterate the pleural cavity." In support of this statement, he gave the particulars of a case observed and related by Mr. Benjamin Phillips, in which, by sloughing of the soft parts, the cavity of the pleura was completely laid open, in two intercostal spaces, to the extent of several inches, and where, "at every act of ordinary inspiration, the lung came into close contact with the ribs; at every expiration, the lung retreated to the extent of half an inch from the ribs." The author then referred to published reports of nineteen cases, in which paracentesis thoracis had been performed for Pneumo-thorax, in ten cases successfully; and, after observing that the question, whether the opening made in the operation should be closed, or kept open, is yet to be decided, but that it seems desirable to him to keep it open, when the air enters the pleura through an opening in the lung, and to close it in other cases; he concluded his paper by relating a case, in which the wound was left open, with a favourable result.

Dr. Webster, in reference to the operation of paracentesis thoracis, said that this operation was as old as the times of Hippocrates. He then alluded

to a case which, some years since, had come under his own care, of circumscribed abscess of the lung, connected with the costal pleura, in which he believed an operation would have saved life.

Dr. Snow said, that the last case related appeared to be one of empyema, and not of pneumo-thorax. He thought that the air was admitted during the tapping. When paracentesis of the thorax was performed in the usual way, it was impossible to prevent the admission of air, and there was not more of it in the pleura in this case than was frequently thus admitted. He considered that this view of the case would better explain why the affected side of the chest did not become distended, than the supposition of the author that it was confined by partial adhesions of the pleura. He was of opinion that in the case in the Westminster Hospital, the lung must have receded from the walls of the thorax during inspiration, and have come in contact with them during expiration, if respiration were performed by means of the muscles, as every one believed.

Dr. George Burrows did not see that the last case or the other cases of Dr. Roe had thrown any light on the difficult question, as to when we were to operate in this disease. These cases, indeed, were generally surrounded with difficulty, whether they were of a simple or complicated character. The patient was in danger of dying asphyxiated, either from the presence of air, or of air and fluid; and yet an operation in a constitution affected with such a disease was likely to fail. Should we, then, operate in such cases? He agreed with the author, that the danger of the presence of air in the pleura had been much overrated. The danger would depend mainly on the quantity and rapidity of the effusion, and the state of the lung on the affected side. If it were diseased, the lung on the opposite side would do the work of respiration with little or no bad consequences. He considered that the cases brought forward by the author had not decided in what cases of pneumo-thorax paracentesis might be employed with advantage. The first case detailed was one of pleurisy with effusion of blood, and the subsequent presence of air: this case proved fatal. The air might have arisen from the presence of an aperture in a bronchial tube. The second case was one of phthisis, with effusion of fluid and air into the pleura, and no good would have resulted from paracentesis; for if the air had escaped from the cavity of the chest by the opening made, the lung would never have again expanded. The third case he agreed with Dr. Snow in regarding as one of empyema. It had been a case of pleurisy, with abundant effusion, and, perhaps, even of ulceration of the pleura. The cases detailed were of pathological interest, but had not determined the question when the operation of paracentesis should be performed in cases of simple pneumo-thorax, or in pneumo-thorax with effusion.

Dr. Baly related the case of a man suffering from phthisis, in whom pneumo-thorax developed itself; he was bled, with great relief. He related another case of pneumo-thorax, unaccompanied by phthisis, in which the patient had paralysis of the lower extremities. Pneumo-thorax suddenly developed itself, and blood was taken from the arm with much relief. He also related a case of advanced phthisis, where air was effused into the pleura. After a time the air was nearly removed, and liquid only remained; this liquid gradually diminished, and when he last saw him, there was scarcely any remaining.

Dr. Ogier Ward related some cases, in support of Dr. Roe's ideas of the little danger that exists from the entrance of air into the cavity of the pleura. In a case where he had operated for empyema in a child, two years and a half old, air was admitted into the chest at the second operation, and again at the third, on each occasion above half a pint of healthy pus being removed. After the third operation, both the air and fluid were absorbed. In another case, the patient, an old woman, lived nearly two years with a fistulous opening into the right pleura constantly discharging pus. In a third case in which he operated, the pleura became gangrenous, and the patient

died; but this was a case of phthisis in an advanced stage. In a fourth case, the patient lived so long after the pneumo-thorax was established, and there was for some time so little disease in the lung, that he regretted he had not operated.

Dr. T. Thompson considered that the operation of paracentesis thoracis, *per se*, was unattended with any particular circumstances of hazard, the danger arising from delaying the operation until the lung became too much compressed. When fluid was in the chest, we should only allow a little to drain off at a time, in order to permit the lung to expand gradually; in this way, only a small quantity of air would be admitted, and become slowly absorbed. It was better to repeat the operation than to admit too much air at once.

Dr. Hamilton Roe, in answer to Dr. Burrows, said, that in his first case the patient was a gentleman with disease of the heart; and on examination after death, there was no aperture in the lung by which air could escape. The lung was healthy, and the air had resulted from the decomposition of the effused fluid. In the second case, he had, previous to opening the body, punctured the thorax, and a large quantity of air had escaped. This he had also done in the first case. The same effect would have resulted if the operation had been performed during life. He believed, that when the lung itself was not much altered in structure, nearly all the air in the pleura would escape if an opening were made in the parietes of the thorax; the lung would expand and nearly fill the pleura. In Mr. Phillips' case, the lung came to within half an inch of the parietes of the chest, showing a tendency to remain of a medium size, when the compression of confined air was removed. Even admitting that this expansion did not take place, the suffering from distension of the pleura, consequent upon pneumo-thorax, was so great, that the operation of paracentesis should not be delayed. In the third case, Mr. Stanley, who had operated, had taken great care not to allow air to be admitted into the pleura. In these complicated cases of pneumo-thorax with fluid, (for he thought that, after a time, fluid to some extent was always present,) the question to be decided was—Should we make an opening into the chest, and support the general health, or leave the case to Nature?

Mr. B. Phillips, in answer to the President, stated that a man was in the Westminster Hospital with an exposed lung for six or seven weeks.

Eleventh Meeting of Session 1848-9. April 24, 1849.
Dr. Addison, President, in the chair.

Case of Foreign Body in the Bronchi. By Samuel Solly, F.R.S., Senior Assistant-Surgeon to St. Thomas's Hospital. A navigator drew into his windpipe a pebble, which he had placed under his tongue to relieve thirst while working. He applied to Mr. Passmore, of Pullins-bar, who, after making him stand on his head, and taking other measures to relieve him, proposed the operation of tracheotomy; but the man preferred coming up to London. On his admission into St. Thomas's, when recumbent and at rest, he was free from cough, and unconscious of the presence of the stone; but severe cough was induced if he moved much, and he fancied the stone changed its position. He lay either on his back or right side; an attempt to turn on the left side producing dyspnœa, cough, and impending suffocation. He referred to the position of the right bronchus as that occupied by the stone, where he occasionally experienced a sore and pricking sensation. On examining with a stethoscope, the respiratory murmur was loud, but otherwise natural on the left side. On the right, there was a loud cooing sound, about four inches below the clavicle; below and over this, about three square inches, there was no respiratory murmur audible. These signs, however, varied; and, at times, the author could distinguish the sound accompanying the ingress of air at every part of the chest. Dr. Cohen found the respiratory murmur absent one inch beneath the nipple on the right side, whilst percus-

sion elicited, over the same part, a clear sound. After the patient had been in the hospital a few days, he was bound to a table, inverted, the operator frequently striking him on the chest and back with his hand. The dyspnœa and spasmodic cough forbade the maintenance of this position beyond forty or fifty seconds. This inversion of the body having produced no effect on the position of the stone, it was determined to open the trachea, which was done, and the man was again inverted, without dislodging the stone: but severe bronchitis was produced, which was twice subdued by repeated cupping and mercury. The patient suddenly left, and, returning to Holloway, died eight days afterwards. Two days after he left the hospital, he was seized with violent coughing, and was nearly suffocated. He declared, at this time, that the stone had changed its position. He had three more convulsive fits shortly before his death; and the expectoration was very profuse through the last week of his life. The *post-mortem* examination, which was conducted without Mr. Solly's knowledge, revealed extensive inflammation and suppuration in the pleura on the left side, and abscess of the substance of the lung on the right side. The stone was firmly wedged in one of the first divisions of the left bronchus, but there was no ulceration of the mucous membrane around it, indicating that it had been long resident there. It weighed 114 grains; its long axis being $\frac{3}{4}$ inch, and its short axis $\frac{1}{2}$ inch. Mr. Solly was prepared to use forceps; but as a long steel probe produced violent spasms, without affording any information as to the position of the foreign body, he did not consider himself justified in employing them. The form would have rendered it next to impracticable to have seized it with forceps. The fatal event was accelerated by the patient's returning to his accustomed stimulants, after quitting the hospital. The history of the case and the *post-mortem* appearances justify the assumption, that the stone was ejected from its original position when the fit of spasmodic coughing came on two days after he left the hospital; and that it immediately afterwards passed into the left bronchus, where it was found after death.

[While the preparation was being exhibited to the Society, Mr. Solly observed, that originally the stone was so firmly wedged in, that the tube required pressure below, in order to dislodge it.]

Mr. J. Hilton. Such cases are of great interest. It has fallen to my lot to see several of them; but, in the present one, there are symptoms which were not at all present in those to which I refer; as, for instance, the sense of suffocation experienced by the patient from the head being turned down. I cannot understand how such could be produced, except by the stone having fallen down into the larynx, and thus irritating the glottis; and it would lead me to question Mr. Solly, as to what explanation he would give in respect to this difficulty of breathing,—as to what was the size of the opening made into the trachea,—and also, how the rings of the trachea were divided, whether the foreign body could have passed through the opening,—and as to what was the cause of the emphysema.

Mr. Benjamin Phillips. In the case of Mr. Brunel, a principle was introduced by Sir Benjamin Brodie, which seems to have suggested the employment of the same plan here. He found that, when attempts were made to dislodge the foreign body, great pain was the result; and it occurred to him, in order to avoid this difficulty, to puncture the trachea, and that thus the spasmodic action would not be induced. The result was, that on two or three occasions on which the opening was made, the coin did pass out without spasm. Although this practice has been adopted on so great an authority, yet I do not believe that it is perfectly established that the successful result as to Brunel would follow in other cases. Probably the stone, in this case, did on several occasions come in contact with the glottis, and set up coughing; and it is clear, too, that the foreign body may be coughed up without spasmodic affection. Shortly after the case of Brunel, one occurred at Edinburgh, in the practice of Dr. Duncan, where a coin was swallowed; the

patient was turned up, and it was ejected without coughing. There are other cases, where a tamarind-stone has been removed; and others, where foreign bodies have been retained for weeks or months in the air-passages, and at last coughed up without any distress at all. It was by no means settled that suffocation was avoided by opening the trachea.

Mr. Solly. The impression produced before the opening of the trachea was, that the stone would not shift. The man did not cough with the spasmodic cough as if the stone shifted. I did not open the trachea because I believed the stone was in that passage. As to the extent of the opening, it was at least an inch in length—quite sufficient for the passage of any body that could have passed into the trachea.

Dr. C. J. B. Williams. Much of the difficulty in these cases arises from the *form* of the foreign body. Nothing appears more calculated to stop up the trachea than this stone; it appears just suited to perform the office of a valve, and this is the great reason why it remained so long in the left bronchus, and afterwards produced disease in the left pleura. But I think a great change takes place after the reception of the foreign body,—the result of the irritation giving rise to a thickening of the membrane of the air-tube, and thus we experience a greater difficulty of operating on the patient. The experiment of Sir B. Brodie had shown, that when the trachea is first opened, the interior may be touched without exciting cough, and it is only when the scalpel is brought up to the glottis that irritation is produced. A great practical point is, that where the presence of the foreign body is clearly made out (and the signs are always obvious), then it is most desirable that the operation should be performed to promote its expulsion, or else that Brodie's mode be adopted. The utility of the operation did not consist in the prevention of the contraction of the glottis, but in prevention of the fatal effects of it. In several attempts I have made to produce irritation in the lower animals, it has produced convulsive coughing. We may deduce an interesting pathological inference from this case; namely, the very striking manner in which it is proved that irritation in the bronchial tubes produced successive disease, deeper and deeper in the lungs. This is nothing more than what takes place in bronchitis from any other cause.

Mr. J. E. Erichsen. I believe that tracheotomy does not suspend irritation of the glottis, but the patient is not in danger of asphyxia. In cases of cut throat, I have introduced a probe through an opening in the trachea, and a spasmodic cough has been produced. There are cases in which this irritability appears to be suspended, and it is an interesting point of inquiry to what this circumstance is due. I knew a case of a girl who had the peg of a top in the air passages, and a dog, in which blades of grass appeared through the glottis. On looking over those cases, it will be generally found that the foreign body has remained a long time in the air tube. We all know that their continued presence exhausts the mucous surface. Irritability of the surface may be relieved by asphyxia; but there are certain cases in which irritability of the larynx is suspended, where mere tracheotomy would not be attended with much benefit, if any. And this leads us to the principle on which we should perform the operation. If it be desirable to endeavour to get the foreign body to pass out, I think it would be well to make the aperture larger. In Brodie's case, the patient had swallowed a half-sovereign; a breathing aperture was made, and the movements of the glottis probably went on; the half-sovereign was loosened, and slipped out edgeways. In one case a sixpence passed out during sleep, without exciting any disturbance.

Dr. Webster. I once had a case of a boy who had swallowed a cherry-stone, which remained for sixty-eight days; tracheotomy was not performed: but inflammation and suppuration taking place, the stone was vomited together with pus, and he got well. Royer-Collard mentions one at Charenton, in which a nail was swallowed, an inch and a half long, but produced no

disturbance in the lung; and also a case of a lunatic, who swallowed a bone of a mutton-chop, which remained six years in the bronchi without producing pectoral disease. But the most remarkable case is one mentioned by an old Covenanter, where a bit of mutton bone was swallowed of the size of a hazel-nut; at the end of fifteen years it was vomited up, and the patient got well. Mr. Barrow once told me of a case, in which he attended a gentleman for pectoral symptoms; till one morning he coughed up a piece of ginger, which had slipped into the glottis.

Mr. P. G. Hewett. A case was admitted into St. George's Hospital, where a man had swallowed a fourpenny-piece. He was first taken to St. Thomas's, and was there turned up on his head. In two or three days, experiencing irritation of the chest, he came to St. George's, under my care. There was evident irritation about the chest, but we could not find obstruction. He had been accustomed to bronchitis. He had been in the hospital four or five days, when one night, about a day before he was to have had an operation performed, he had a sudden fit of coughing, and the fourpenny piece made its appearance in his mouth. I do not think that the stethoscope would invariably indicate the presence of a foreign body.

Mr. Macilwain. There are many cases like those which Dr. Webster has mentioned, which give us encouragement; but we are hardly yet in a position to judge of a remedy. In many of the cases, the secondary conditions have been, perhaps, greatly the consequence of the endeavours made to extract the foreign body.

Mr. Henry Lee said, that the principle upon which the opening the trachea, in the cases now under discussion, had been introduced, had not been fully stated. If he understood the principle upon which Sir Benjamin Brodie at first performed this operation, it was neither with a view of allowing the foreign substance to escape through the opening, nor with the idea that the glottis would no longer retain its irritability; but, he believed, it was performed with the view of exhausting the irritability of the muscles of the glottis. In case the coin should descend, as it had done before, to the glottis, when the patient was subverted, if it could be allowed to remain in that position a sufficient length of time, the irritability of the muscles would be exhausted. They would relax, and the coin would be allowed to pass. The opening, then, was made in order to allow the patient to breathe during the time that this was going on. It was true that in Sir B. Brodie's case this interval did not occur. The treatment was fortunate as well as judicious; but the good fortune which attended the operation ought not to be allowed to veil the judgment with which it was undertaken.

Special General Meeting. May 1, 1849.
Dr. Addison, President in the Chair.

Accommodation Question. The Secretary having read the circular convening the meeting,

Mr. Phillips, Treasurer, said it would be necessary that the meeting should be apprised of what the Council had done in order to obtain suitable premises for the Society, and the reasons by which they were influenced in making the recommendation which was to be the subject of discussion. Considerable exertion had been made for the purpose of determining what was best to be done in the matter. So long ago as 1847, the matter came under the consideration of the Council, with reference, mainly, to two points: first, whether additional accommodation could be obtained in the premises they now occupied; and, secondly, whether the present meeting-room should be enlarged. A Committee was then appointed, to make the necessary inquiries. They found that Mr. Scott, their immediate landlord, was prepared to dispose of his interest for about £600, and that the other tenant might probably be induced to retire for a fair consideration. It was found, that about £500 would be required to put the premises into tenantable repair, and £600 for

enlarging the meeting-room. Seeing that the unexpired term of Mr. Scott's lease was only twelve years; and that, at the end of that time, the original landlord would probably require an increased rent, it was not thought advisable to adopt this course. It was afterwards thought desirable, that means should be taken to find some premises more eligible than those which they now occupied. From that time to the present every inquiry had been made, but no better premises had been found. Many difficulties in connexion with removing were seen; and the conclusion finally arrived at, was, that it was not desirable to remove at present. On further inquiry, it was found that the present holdings in the house in which the Society now occupied apartments, were terminable at Michaelmas 1850; and that, after that period, the whole of the premises could be obtained at a rent of £210, with rates and taxes amounting to about £60. This amount might, if necessary, be lessened by letting the stables at a rent of £35 per annum; and, probably, the first-floor, which might realise £100 a year. If these were let, the Society would pay £80 less than they at present paid for their apartments; if not, the rent would be £18 more. If, however, the Society placed itself in Mr. Scott's shoes, it would be liable to repairs. These had been estimated at £500; but Mr. Scott believed they would amount to much less, and was prepared to make an allowance if they should exceed £300. Mr. Pownall, the architect, had advised the Society to accept Mr. Scott's proposal; and, considering the difficulty of finding suitable premises elsewhere, the Committee appointed to inquire into the matter, recommended the Council to act upon that recommendation. Inquiries had been made, by the Committee, of Mrs. Rankin, under whom Mr. Scott held the premises, whether she would grant an extension of the lease on reasonable terms; but her views were so out of the way, that the Committee could not recommend the Council to fetter themselves with any arrangement with her. It had been represented by some, that there were houses to be had which would be more convenient. The Council, however, had used all diligence to find such, and had not succeeded. There were very many houses to be had; but none of them afforded such accommodation as the Society needed. The situation of the Society's rooms in Lincoln's-Inn-Fields, was a central one; but it became a matter of complaint, that the great bulk of the Fellows were to be found west of that locality, in consequence of which, the Society removed to the premises they now occupied. Many of the Fellows, however, were now north-west; and it might probably be found convenient to follow them thither, so that it would not be prudent for them to burden themselves with a very long lease. To show that the removal from Lincoln's-Inn-Fields was expedient, was evident from the fact, that, at the time the Society left, there were only 132 resident members; but the number at the last annual meeting, was 284. Mr. Phillips concluded by moving that the following recommendation of the Council should be agreed to: "*That it is expedient to enter into arrangements for the purpose of obtaining, at a rent of £210 per annum, the whole of the house in which the Society at present holds apartments.*"

Dr. Wilson seconded the motion.

Dr. Webster. Some important facts were stated by Mr. Phillips; but still, he confessed, he was decidedly against remaining in Berners-street. The locality was inconvenient; and, in a few years, it would be even more inconvenient than at present. Besides, if the money proposed to be expended were laid out, he did not think such accommodation could be obtained as the Society required. Their present meeting-room was very badly ventilated—(hear, hear),—and exceedingly disagreeable. They ought to have something more than a dull, unventilated, room to assemble in. If they took the lease upon the terms stated, they would be compelled to remain. His feeling was, to enter into no additional terms. He had all along thought that a more central position (Charing-Cross, Cavendish-square, or Hanover-square,) would be more eligible situations than Berners-street. He should feel disposed to

give Mr. Scott notice that they would remain as his yearly tenants; but not take the lease from him, or any one else, beyond 1855. In time, perhaps, the Society might have accumulated sufficient money to move elsewhere, and build premises for themselves. The Government, he hoped, might, in future years, be disposed to patronize Societies of such a nature; in which case, they might probably find them accommodation in a public building, or, at any rate, grant them facilities for obtaining suitable premises. He should move, therefore, as an amendment to Mr. Phillips's motion,—"*That it is not expedient to enter into any new lease with the landlord, respecting the present premises.*"

Dr. Roberts seconded the amendment.

Mr. Charles Hawkins did not see how the Society could be at all improved by the adoption of the Council's recommendation. The accommodation they now had, they possessed till 1855; and all that the Council, as it appeared to him, proposed to do, was, to add eleven years to the term of the present lease. At present they paid £217 rent, without rates and taxes; by the Council's proposal, they would have to pay £210, with rates and taxes. The expense required to put the house into repair, would be £600. The fag end of a lease was a serious thing to take upon them; and, as it was only for eleven years, he did not suppose the Council would recommend the Society to lay out £600 in the extension of the present meeting-room, which was the principal thing they now required. If the Society took the lease for this term of years, they might be obliged to leave it at the expiration of that time, if they could not come to terms with the original landlord. It was impossible for them to go to Charing-Cross, or the neighbourhood, for the rent of premises there would, of itself, swallow up their whole income. It was not possible for the Society to be continually moving to fashionable localities. The best plan would be, to enter into some arrangement, at once, with the original landlord, for a long lease, in which case it would be worth their while to expend £600, or even £1,000, in enlarging their present room.

Mr. Phillips said it was felt by the Council, that it was hardly advisable to make an outlay of £600 for so short a period as eleven years. There was no reasonable doubt, however, that an extension of the lease might be obtained. When he saw the solicitors of Mrs. Rankin (who held the property under the Berners' estate), they seemed to think that the Society was "squeezable", and that they could get what rent they pleased; but the rent at present paid was unquestionably sufficient. The sum received by Mrs. Rankin from Mr. Scott was £160; but the Society had been asked £220. It was thought advisable not to make any immediate overtures to Mrs. Rankin, or to betray any signs of anxiety about the matter, as it seemed pretty clear that she would be willing to take a reasonable rent ultimately. It was said, that the extent of Mrs. Rankin's lease was forty years; but he had reason to believe that it was not so long. If the Society had the whole house, they would not be annoyed by the nuisance to which they were now at times subject from other tenants. If the house was their own, they could admit what tenants they pleased. The managers of the Berners' estate had told him, that they could not then enter into any arrangement with regard to the extension of the lease; but that they should be glad for the Society to remain as yearly tenants, and that none but reasonable terms would be offered. They promised to furnish the Society, at any time, with a letter approving of an enlargement of their room,—so that no difficulty should be felt in the matter on their account. It had been suggested, that the room should be one in which the Fellows could meet together as in an ordinary meeting-room; but it was also thought advisable, that there should be a room in which they might sit down and read without interruption. And it was felt, that if further accommodation was obtained in the house, such a room might be secured. Other uses had also been suggested to which the premises might be applied.

Mr. Hawkins would be happy to vote for the resolution, if accompanied by the following proviso: "*Provided the Council are enabled to make such*

arrangements with the original landlord as will justify them in increasing the size of the present meeting-room."

The Chairman was about to put Dr. Webster's amendment, when

Mr. Wood said they were not yet put sufficiently in possession of the facts of the case, to enable them to come to a decision.

Mr. Arnott explained, that the Society's immediate landlord was Mr. Scott; and that he held under Mrs. Rankin, who had a lease under the Berners' estate. A part of the house was let by Mr. Scott to the Society, and a part to other tenants. The Society had, in consequence, been subject to some nuisances; and the existence of these, together with the fact, that additional accommodation was required, had brought the matter under the consideration of the Council. If they wanted further accommodation before 1855, they would have to get a further lease; if they were contented to remain, with their present room, till that period, they could do so. One reason why the matter had been delayed, was, that the members at large might have an opportunity of considering the subject. If they were content to remain as they were, no amendment was necessary, as they had only to negative the proposition made by the Council. If they took Mr. Scott's lease, they took it till 1861,—the length of his term; they could not, however, obtain possession of the whole house till Michaelmas 1850. At present they paid £210 per annum; by having the whole house, they would pay, including rates and taxes, £270. The difference might be lessened by letting the stable for £30 a year. As to their having the tail of a lease, any person might understand what that meant; and he could not see what difficulty there was connected with it. There might be some expense incurred in making repairs and alterations; and if the sum estimated (£500), had to be expended, what would that signify, if they could have a good house? But he did not think the alterations would cost any thing like that sum. At the end of the present lease, Mrs. Rankin would, no doubt, be as glad as other people to get good tenants, and would willingly grant them an extension on reasonable terms. Mr. Scott was willing to assent to these terms now; but were they sure that he would do so a few years hence, when the Society would be more pushed than at present? He thought the best plan would be, to adopt the proposal of the Council. Then, at the end of the eleven years, they must, if possible, deal with Mrs. Rankin; and if they could not, their only alternative would be, to leave.

Dr. Webster's amendment was then put; but only five hands were held up in its favour. It was consequently rejected.

Mr. Hawkins moved the *addition to the resolution* stated above.

Mr. Atkins seconded Mr. Hawkins' amendment.

Mr. Hawkins said he would not press the amendment, if Mr. Phillips would pledge himself, on behalf of the Council, to secure the original lease, and extend the meeting-room; but Mr. Phillips declined to do so.

The room having been divided, there were,—

Against the amendment	32
For the amendment	29
Majority against the amendment ...	—3

The amendment was, therefore, rejected. The original resolution was then put, and carried.

Twelfth Meeting of Session 1848-49.—May 8.

Dr. Addison, President in the Chair.

The Causes and Morbid Anatomy of Mental Disease. By John Webster, M.D., F.R.S. The author commenced his paper by observing, that having had two of his communications on the Statistics and Pathology of Mental Diseases, already published in the 26th and 28th volumes of the Society's *Transactions*, he presented the present as a further exposition of these subjects. He then stated, in illustration of the comparative frequency of madness in the two sexes, that out of 1798 lunatics admitted into Bethlem

Hospital, during six years, ending 31st of December last, 1094 were females, and only 704 male patients. He next alluded to the causes apparently producing insanity, which he divided into moral and physical, besides hereditary tendency to mental disease. Of the male lunatics, nearly one-half, or 346, became mad from moral causes; whilst the proportion of females was not quite so considerable, being 489 of the entire number. By physical causes, less than one-fourth of the male lunatics, or 156, became insane; whereas, amongst the female patients, the proportion was rather larger, being 282. Hence, speaking generally, moral causes produced half the total cases; but physical causes only one-fourth. The principal moral influence which occasioned insanity amongst males, was reverse of fortune, whereby 86 examples are recorded. Next, anxiety, which furnished 69 instances; then religion, giving 45 cases; lastly, love, which caused the loss of reason in 18 men. Amongst female lunatics, anxiety was the most frequent moral cause, producing 79 instances out of the 489 patients classed under the above category; whilst 69 cases arose from religion; 62, from the loss of relatives; and 57, from the more powerful influence of the "tender passion" upon the susceptible feelings of women. Fright caused insanity in 50 cases; reverse of fortune, in 49; whereas, amongst men, as already stated, the same cause produced nearly treble that amount,—speaking comparatively. In regard to physical causes, of the 156 male lunatics so affected, 80 cases originated from intemperance; and of the 282 female lunatics, similarly classified, 117 arose from puerperal disease. Other physical causes were subsequently mentioned by the author, before passing to the examination of hereditary tendency to mental complaints. Of 704 male lunatics, previously enumerated, 219 (or 31·10 per cent.) had hereditary tendency to mania; but of the 1,094 female insane patients, the proportion was larger, namely, 390, or 37·47 per cent. The author, amongst other remarks respecting the influence of hereditary tendency in producing mental disease, said, such an important fact, wherever it exists, should be always well considered by parties forming matrimonial engagements,—especially when both families are unfortunately so tainted. He next adverted to the age at which insanity is most likely to supervene. In males, he stated the most susceptible time of life was from 30 to 40; but in females it was earlier, being from 20 to 30. The author subsequently noticed the two sections of psychological physicians now dividing the profession, namely, the "vitalists", and the "anatomists"; of which latter body he is himself a disciple, since he considers their doctrine the most rational, and in a greater degree consistent with the present advanced state of pathological knowledge respecting mental diseases.

The author afterwards gave a synopsis of 67 dissections made at Bethlem Hospital. In 53 cases, effusion of water had taken place in the ventricles; in 53 cases, also, there was infiltration of the pia mater; in 38, turgidity of the cerebral blood-vessels; in 30, the arachnoid membrane was thickened and opaque; in 26, the colour of the brain was altered from its natural tint; in 15, there was an effusion of blood within the skull, besides other alterations of structure, as mentioned by the author. The organs of the chest were likewise more or less diseased in as many as 62 of the patients; whilst in 30, morbid changes were likewise noticed in the abdominal viscera. So much so, indeed, was this the case, that the immediate cause of death, in a number of the insane patients referred to in the present communication, was apparently disease in these parts; but, more especially, affections of the organs of respiration.

Dr. Webster then alluded to the long period during which some of the lunatics had laboured under mental aberration, particularly females,—one female lunatic having constantly resided in the incurable ward at Bethlem Hospital, for upwards of half a century, or, actually, fifty-four years; thereby showing, that the loss of reason is sometimes not incompatible with longevity.

Dr. J. A. Sutherland, Mr. Solly, Mr. Streeter, and Dr. Sibson, made observations on Dr. Webster's communication.

Thirteenth Meeting of Session 1848-49. May 22.
Mr. Macilwain, Vice-President, in the Chair.

Table of 166 Cases of Secondary Syphilis observed at the Lock Hospital, during the Years 1838-39. With a Statistical Analysis, and Observations. By Henry Lee, F.R.C.S., Assistant-Surgeon to King's College and the Lock Hospitals. I was shown, that out of the whole number (166 cases taken consecutively, as they presented themselves) a very small proportion had been properly treated by mercury; and it was argued, that if proper mercurial treatment were not a preventive of secondary syphilis, cases where this medicine had been properly employed, and had failed to cure the disease, would have presented themselves among the rest. "If," observes the author, "in the present day it should be found that out of 100 patients presenting themselves with small-pox, a very small proportion only had ever been vaccinated, this negative evidence in favour of vaccination would carry with it as much weight as would attach itself to the histories of any number of vaccinated persons who subsequently remained free from small-pox." In like manner, the author endeavours to prove that the very small proportion in which cases of secondary syphilis occurred, after proper mercurial treatment, was an undeniable evidence of the efficacy of that medicine. The cases in the table were arranged into those which were treated by mercury, and those which were not; and each class was again subdivided into those where the primary ulcer was accompanied by induration, and those in which this had not been observed. From a comparative view of these cases, it appeared that where mercury was given ineffectually, so as not to eradicate the disease, it favoured the formation of bubo, and that, moreover, the class of secondary symptoms which followed were of a more severe nature than where no mercury had been given. The papular and scaly eruptions were observed most frequently when the disease was allowed to run its course, but the pustular and tubercular were most frequently noted where ineffectual mercurial treatment had been had recourse to. The author supposed that injudicious mercurial treatment had a tendency to convert the papular eruption into the pustular, and the scaly into the tubercular, and that, if a sufficiently large number of cases were taken, the proportion in which this would happen would be alike in each class of cases; so that it might be stated that the papular eruption would bear the same proportion to the pustular, as the scaly would to the tubercular.

Mr. B. Cooper, Mr. Acton, Mr. Macilwain, Mr. Gay, and Mr. Lee, engaged in an interesting conversation, but for which we have not room.

Fourteenth Meeting of Session 1848-49. June 12.
Dr. Addison, President, in the Chair.

On Certain Tumours of the Mammary Gland. By John Birkett, Esq., Assistant Surgeon to Guy's Hospital. The author related cases illustrative of the general characters and structural anatomy of the morbid productions, or new growths, to which it was his especial object to direct attention. They are characterized by a remarkably lobulated exterior, and a succulent, glistening aspect, on section. They consist of a large quantity of uniting, or areolar tissue, and present, when carefully examined by the aid of the microscope, the cæcal terminations of gland tissue. Nucleated bodies are found in these hypertrophic growths, but these are merely embryonic elements, possessed in common by all new growths. The origin of these growths are due to excess of nutrition; they resemble the healthy gland structure, but have no lactiferous tubes. They usually occur before the age of thirty, and are more frequent in the unmarried than the married; the function of the mammary gland is generally unimpaired. Their more ordinary position is on the surface of the gland, and they may attain a very large size, their existence not being necessarily accompanied by pain. They are harmless, but usually not amenable to general remedies, nor to any treatment except excision. The

author concluded his paper by some remarks on hypertrophic growths generally of the breast, dividing them into perfect and imperfect hypertrophy The former most commonly occurs about puberty, and consists in great increase in the breast, from development of true gland tissue. The latter, or imperfect hypertrophy, he subdivides into lobular, general, and cystic. The first has been alluded to already. In the second, the true gland is atrophied by the encroachment of the new growth, so as to be no longer recognizable. The cystic form is regarded by the author as imperfect gland tissue, (hydatid disease of Cooper; cysto-sarcoma of Müller.)

Mr. Cæsar Hawkins did not think the author of the paper correct in designating the disease described, "lobular hypertrophy." Hypertrophy was increased growth of the natural structure, but these growths were new and isolated in their formation, and could be turned out entire. They could not, therefore, be any more denominated hypertrophy than could a fatty tumour. We knew that there were two kinds of fatty tumour, one a mere increase of deposits in the fatty cells themselves, the other isolated tumours similar to those described in the paper. There was some addition to what he knew of these tumours made by the author, such as their containing epithelial cells and imperfect ducts, but still the old name was as correct as the proposed new one.

Mr. Birkett said that some obscurity hung about his paper, from part only of it having been read. Authors had given most indefinite names to these tumours. He had seen no tumour which was not connected with the mammary gland, though it might be surrounded by dense fibro-cellular tissue, the result of the pressure of the tumour. They were as much hypertrophy of the gland as epulis was hypertrophy of the gum tissue.

Case of Popliteal Aneurism. By J. D. Wright, Surgeon-Major, Grenadier Guards. This case derives its interest from the fact of a favourable termination having followed the application of a ligature on the femoral artery after the aneurismal sac was ruptured, compression having previously failed in effecting its obliteration. The patient was aged thirty-seven. Six days prior to his admission into the hospital, he had become aware of a popliteal swelling, to which his attention was directed by pain in the knee. The tumour, on examination, was found to be as large as an orange, and presented all the characteristics of true aneurism. He was bled, and the pad of an Italian tourniquet applied over the femoral artery, just before it enters Hunter's canal. Effectual pressure could not be borne continuously; but the limb gradually became accustomed to partial interruption of the flow of blood through the artery, and the tumour became smaller and more solid. On the eighth day, however, the sac burst while the patient was at rest, and it was deemed advisable to tie the femoral artery, which was done after the lapse of only three hours. The ligature separated on the twenty-sixth day, and the wound healed kindly. A twelvemonth has since elapsed; the man is well, and the tumour is reduced two-thirds of its volume.

Peculiar Variety of Closed Pupil. By P. C. Delagarde, Surgeon of the Devon and Exeter Hospital, and of the West of England Eye Infirmary. The form of closed pupil referred to is characterized by dark brown pellicles, extending from the iris to the capsule of the lens, the consequence of inflammation of the former texture, and conjectured by the author to be portions of the uvea retained at their point of adhesion, and partially detached from the retracted iris; these pellicles may cross one another, occupy the pupil, and close its aperture. The author cites three illustrative cases, and details their treatment. 1. In a man of fifty-four, the crystalline and its capsule had been previously removed, and the dark elongations of the uvea filled the whole area of the pupil. The iris and obstructing uvea were divided transversely, by introducing a sharp-pointed iris knife through the sclerotic, be-

hind the ciliary body: the cure was permanent. 2. Dark matted bands of uvea concealed the crystalline lens, and adhered to its capsule, in a female of fifty-three, who had been the subject of syphilitic iritis six years before, which terminated in loss of vision. The crystalline lens of the right eye (being opaque) was first dispersed, and the capsule torn up, and the pupil cleared of uvea in four operations, the needle being introduced twice in front of, and twice behind, the iris. Belladonna was afterwards freely employed. A similar operation was twice repeated on the left eye, after which she suffered from rheumatic iritis, resulting from imprudent exposure, which was followed by hypopion, and the pupil was permanently closed. Some months after this the perception of light was strong, but the author did not recommend the division of the iris, as the new pupil could not have corresponded with its fellow: she has now sight sufficient to follow her household duties. 3. A wayward boy of fourteen had opacity of the cornea, and attachment of the iris to it, constituting a further complication; the sight had been lost some years before by severe inflammation, and an ulcer had penetrated the cornea of the left eye five years later. This ulcer existed at the date of his admission, and the pupil was occupied with a broad film of very dark uvea; the lens was opaque, but pale. Keratonyxis was twice performed, the capsule of the lens being opened, and the uvea freely divided. The capsule was subsequently detached from the iris, after three or four attempts, the boy's resistance rendering the operations through the sclerotic very difficult. The pupil subsequently expanded freely. The needle was subsequently introduced three times through the cornea, to cut off a large conjunctival vessel, and detach the lower edge of the pupil from the back of the cornea, at the seat of the perforating ulcer. A satisfactory result followed, the lad having sight sufficient for all common purposes.

Sixteenth Meeting of Session 1848-49. June 26, 1849.[1]

Discovery of Oxalic Acid in the Blood. A paper was read by A. B. Garrod, M.D., Assistant-Physician to University College Hospital, on a case of chronic hiccup or vomiting. The chief morbid appearances presented after death, were a slightly granular state of the kidneys, with the tubules blocked up with urate of soda. The blood, on examination, showed the presence of a large amount of urea; and Dr. Garrod also found in it a considerable amount of oxalic acid, which he obtained in the form of the octahedral and dumb-bell-formed crystals of oxalate of lime. Dr. Garrod has found traces of this acid in four other cases, but not in quantities at all equal to that found in the case detailed.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Seventh Meeting of Session 1848-9.—March 7.

Dr. Gairdner in the Chair.

Dr. Spittal's Singular Case of Spasmodic Action of the Lower Jaw. Dr. Spittal requested permission to make a statement in reference to the case reported at p. 407 of our April Number, in consequence of the doubt expressed in regard to the reality of the affection. In Dr. Graves' Clinical Lectures (p. 465, etc., 2nd Ed., Vol. I: Dublin, 1848), the affection is described as "an insuperable desire on the part of the patient to grind his teeth,"—originating in a "disagreeable uneasy sensation in the teeth themselves, and being for the moment alleviated by forcibly grinding them together, but immediately returning when the patient ceases to perform this action, which is therefore continued when the disease is confirmed, during the entire day. When asleep the patients no longer grind their teeth, the grinding being in all cases the result of voluntary motion." Dr. Graves' Cases. 1. The Countess

[1] At the meeting of 26th June, several other papers were read, but the report of them we must defer till next number.

of Egmont had the grinding so confirmed, that, when she desisted, the uneasy sensation in the teeth became insupportable. She had to give up all society for several years before her death. The teeth were worn down to the very socket. 2. The Rev. Mr. B. was driven from society by the same affection. His teeth were much ground down. Incisors and canine, *whetted* by each other, acquired chisel-shaped edges, which sometimes cut the tongue like a knife. 3. A young clergyman afflicted with *tic douloureux* of several branches of fifth pair, including the left dental nerves, had the teeth of the left side only ground down. The disease ceased after two years. 4. Henry W., æt. 60, three years ago gradually got the habit of grinding his teeth, which he now does constantly when awake, and "*so loudly as to be heard in the next room.*" He is said to be unconscious of it unless when spoken to. The teeth are ground down. 5. A gentleman, æt. 45, after a severe wetting, was attacked with paralysis of the right side. He recovered; but about a year after, observed in himself a tendency to grind his teeth, which gradually increased so as to prove a "*nuisance to himself and every one about him.*" He appeared to be relieved for six months by actual cautery applied behind one ear, the use of mercury, and extraction of one tooth. The affection returned: when iron, etc., were tried in vain. *By pressing the tongue against the upper incisors, or by touching a certain part of one particular tooth,* he could at any time arrest the grinding and suspend it as long as the pressure was continued. Dr. Graves is of opinion that the irritable state of the dental nerves, which gives rise to this *irresistible tendency to grind the teeth,* depends chiefly on the existence of gout in the constitution. Dr. Spittal trusted he had shown that the affection under which his patient had laboured need not have been simulated.

On Descent in the Diving-Bell improving Deafness, dependent on Occlusion of the Eustachian Tube from Inflammation. By Dr. Adam Warden. The object of this paper was to show that the increased pressure of the atmosphere acted as a delicate wedge; that by forcing air into the tympanic cavity, it opened up the parts, and removed the obstruction.

Case of Rupture of the Bladder. By Dr. Taylor. This paper is published in the *Edinburgh Monthly Journal* for May, p. 748.

Eighth Meeting of Session 1848-9.—March 21.

James Syme, Esq., President in the Chair.

Tumour of the Cheek.—Varicose Veins with Phlebolites. Mr. Syme exhibited the preparation and wax cast of an unusual form of tumour of the cheek. The tumour was removed from the cheek of a girl, aged 23, who, about two years and a half before, had received a blow in that situation. Soon afterwards she observed a slight enlargement, which afterwards, from its size, became inconvenient, though not painful. Mr. Syme removed the tumour, by making an incision through the mucous membrane of the cheek, and then pulling it out, which required no force. The mass thus removed was somewhat larger than a pigeon's egg, of an ash-grey colour, irregular in shape, and enclosed within a delicate web of areolar tissue. It consisted mostly of tortuous veins, imbedded in a little fat; and was considered by Professor Goodsir as a varicose condition of the venous plexus, which is situated between the muscles of the cheek, and communicates with the internal maxillary and deep facial veins. Mr. Vander Byl, who also examined the tumour, observed that the veins were much thickened in their coats, and contained numerous phlebolites, varying in size, irregular in shape, and smaller than peas; and that these bodies consisted of a horny external portion, enclosing calcareous matter, which under the microscope presented beautiful rhomboidal plates of cholesterine, and masses of granular matter. Extensive erysipelas of the face and head had unfortunately proved fatal to this patient, some weeks after the operation.

Amputation in the Lower Part of the Thigh followed by Necrosis of the Femur, for which Amputation at the Hip-Joint was performed. Mr. Syme exhibited a preparation of the upper two-thirds of a femur removed by the hip-joint operation on the 13th September last. The whole shaft of the bone was necrosed, and the exfoliation extended quite close to the joint, thus showing the necessity of the hip-joint operation. There was no tendency to separation, but a large quantity of new bone had formed round the necrosed shaft. The patient, a labourer, æt. 24, was admitted on the 7th September 1848, having, a few hours before admission, received the following injuries, occasioned by a fall of earth while working in a railway tunnel. A very severe compound dislocation of the right ankle joint, with fracture of the tibia above the malleolus, and another fracture a little above the middle; the lower end of the fibula was exposed for several inches, and very much comminuted. There was severe laceration of the soft parts—great effusion of blood, accompanied by the admission of a considerable quantity of air beneath the integuments. The tibia and fibula of the left leg were fractured above the ankle—there was great eversion of the foot, with enormous swelling and ecchymosis of the whole limb; so much so, that it was difficult to say which limb was the most severely injured. Under these circumstances, an attempt was made to save both. The exposed portion of the fibula was removed, and proper splints applied. For ten days everything went on favourably; but, after that, he was seized with bowel complaint, lost his appetite, his urine became scanty and high-coloured; he had a heavy dingy appearance, and his whole body assumed a yellowish colour; in short, he exhibited all the symptoms of phlebitis. However, in about a week, his health improved, but the discharge from the wound, and from incisions made in different parts of the leg, increased to such an extent, that, as a last resource, amputation was performed in the lower third of the thigh by the circular incision. Two circumstances worthy of notice occurred during the operation. The first of these was the greatly thickened state of the coats of the femoral vein; the other, the very dense and almost ivory appearance of the shaft of the femur. The wound, at the end of three weeks, was entirely healed, except at one small part, where the bone was felt to be bare; but the looked-for exfoliation did not become detached. Three months passed over, during which repeated attempts were made to ascertain if the dead bone would separate. The femur got thickened, and the patient suffered much pain, more especially over the trochanter and neck of the bone. Abscesses formed in all directions, there was a profuse discharge, and the patient's health became seriously affected. At a consultation, on the 12th September, it was agreed that amputation at the hip-joint was required: and it was performed on the following day by Mr. Syme, by anterior and posterior flaps. Little blood was lost, although twenty-one vessels required ligature. The operation has proved completely successful.

Dilatation of Urinary Passages from Calculus: Retention of Urine: Coma: Death. Mr. Spence exhibited a preparation of the urinary organs, taken from a boy seven years of age. The bladder was very much enlarged, and its muscular coat greatly increased in thickness; in the prostatic part of the urethra there was slight enlargement of the verumontanum. The right kidney was converted into a large membranous cyst, which contained a calculus; the ureter of that side was tortuous and enormously dilated, being equal in diameter to the small intestine; the left ureter was also dilated, but in a lesser degree; its dilatation was greatest near the bladder, and it became much contracted near the pelvis of the left kidney, which was dilated; the left kidney itself was considerably enlarged, but its glandular substance, though altered in structure, had not suffered as in the right kidney. The vesical orifices of the ureters on both sides, were of their natural size. Both testicles were condensed and altered in structure, and each contained a small quantity of pus.

Mr. Spence was first consulted two months before the patient's death, on account of pain and swelling in the testicles, which had then descended for the first time. On asking the parents if he complained of pain in making water, Mr. S. was told, that about four years previously he had suffered from retention of urine, which once required to be relieved by the catheter, and that afterwards he had twice passed small calculi by the urethra; they further stated, that though thin and delicate, his appetite was good; that he had no complaint except pain in making water, and after having passed it, and occasionally incontinence of urine; they had never observed any blood in his urine, nor had he had swelling of the feet and legs, or pain in the back, except just before the time when he passed the small stones. On examining a specimen of his morning urine, it was found of a pale straw-colour, with a thin cloud of mucus floating in it; had an acid reaction; under the microscope it exhibited crystals of uric acid, epithelial scales, mucus, and yellow lithate of ammonia. The parents were desired to return to have him sounded, when the irritation of the testicles was subdued. Mr. Spence heard no more of him till the evening of the 5th February, when his father brought him to have the urine drawn off; his medical attendant stated that he had drawn off the water on the two preceding days; but that on the 5th he had found it impossible, owing to struggling, and had therefore sent the child to town. Mr. Spence introduced the catheter whilst the child was under the influence of chloroform, and drew off between three and four pints. For about a week before this attack of retention, his appetite and general health had begun to fail, and for the last few days he had taken no nourishment except a little milk; he was listless and sleepy; his pulse was 100, and small; his tongue a little white, but not foul; and he had complained much of pain in making water before the retention came on. On the 7th February, after partially drawing off the urine, Mr. Spence examined the bladder carefully with a sound, but could not detect any stone; a dose of castor oil was ordered, which acted four times, and brought away a large lumbricus. He was not, however, relieved by any remedy used; the retention continued to require the use of the catheter twice a day, and after the 7th February he fell into an almost comatose state, gradually sank, and died on the morning of 9th February.

Mr. Spence directed attention to two points. *First: The cause of the disease.* The increased capacity of the bladder, taken in connexion with its increased muscular power, the dilatation of the ureters and the cystic condition of the kidneys, were precisely similar to what is seen as the result of obstruction to the excretion of urine from stricture of the urethra. Yet the boy, until a week before his death (with the exception of one occasion), never had complete retention of urine, and there was no difficulty in introducing a No. 3 catheter, nor even a No. 4 sound. *Second: The comparatively slight symptoms which have accompanied such extensive organic disease, ought to serve as a practical caution to surgeons.* Almost all the symptoms were such as often arise from urinary calculus; and had the calculus found in the kidney passed into the bladder, and been felt with the sound, there would have been nothing in the general symptoms, state of the urine, or history of the case, to have contraindicated lithotomy; which, from the state of the parts, would have been certainly fatal.

Cancer of Lung, Liver, and Spinal Column. Dr. Bennett submitted to the Society preparations from the lungs, liver, and vertebral column, illustrative of the case of a woman, aged 60, admitted into the Royal Infirmary, labouring under paraplegia. There was great emaciation, and a large sloughing sore covering the entire sacrum. On examining the chest, no particular dulness was heard anteriorly, but from the state of the patient, no examination posteriorly was made. The patient had never complained of pulmonary affection, and was stated to have been very healthy and strong up to a month before admission, when on waking one morning she found both her inferior extremities to be completely paralyzed. She sank exhausted shortly after admission.

The lungs exhibited several nodular masses, varying in size from a hazelnut to that of a walnut, some of them breaking down into a soft pulpy matter, of cheesy consistence, yellowish colour, resembling tubercle. Half of the upper lobe of the right lung, posteriorly, was occupied by a mass of this substance, the pulmonary tissue anteriorly being emphysematous. The liver contained a number of white encephalomatous masses, both on the surface and throughout its substance, and in the centre of the right lobe was a large cavity, containing the same cheesy material as was found in the lungs. Other masses were observed passing from one structure to the other. The bodies of the eighth and ninth dorsal vertebræ contained a similar morbid deposit, and, from their enlargement, had pressed upon the medulla spinalis, and thus caused the paraplegia. The body of the third lumbar vertebra was also infected with cancer. The microscopic structure of these morbid masses was for the most part very similar to that described by Müller as the *reticulum* of cancer; *i. e.*, broken up cancer cells, intermixed with numerous compound granular corpuscles and granular matter. In the liver, however, a more characteristic cell-structure was discovered, passing into the retrograde cancerous mass. The bladder was corrugated, and its mucous membrane was cracked and fissured, presenting in several places an incrustation of crystalline phosphates. From the sloughs on the back, and the exhausted state of the patient when in the ward, the posterior thoracic region was not examined. Anteriorly, the chest was everywhere resonant, and no anormal râles could be heard, neither were any functional pulmonary symptoms present. It was remarkable that such extensive disease of the lungs should have existed without causing their functional derangement. Death was occasioned by exhaustion from the sloughing of the back. The case is an example of the great extent to which cancerous masses may be deposited in important internal organs, without materially interfering with their functions.

Old Hæmorrhagic Lesions (Apoplexy) of the Lungs, resulting in Sloughing Limited Abscesses, and in Coloured Cicatrices—Perforation of the pleura. Case i. A patient died under the care of Dr. Andrew, in the Royal Infirmary, having presented during life distinct signs of empyema and pneumothorax. On dissection, the left pleura was found half full of fluid; the lung was compressed, and the upper part of the pleural cavity contained air, which had evidently come from a circular perforation of the pleura, about half an inch in diameter in the lower lobe. This opening communicated with a superficial cavity the size of a cherry, and numerous closed cavities of nearly similar size were found in both lungs filled with pus, and containing small dark-coloured sloughs, such as are found in cutaneous boils. Such abscesses were commonly ascribed to lobular pneumonia; but, in the present case, the lesions were shown to be the result of extravasation, by their occurrence in connexion with numerous coloured cicatrices, (not unlike some of the stages of false corpora lutea,) which were dispersed through the compressed lung, and also through the other, which was generally pervious to air. These cicatrices presented, on microscopic examination, many of those masses of pigment, varying from rust colour to black, which were characteristic of altered hematin. Case ii. A man was admitted into Mr. Syme's ward with fracture of both legs. The fractures had united, and he was considered convalescent, when he was attacked with shivering and pain in the left side of the chest. The physical signs of pneumothorax were soon developed, and he died. This man expectorated, during the last day of life, a large quantity of prune-juice coloured sputum, a portion of which was brought to Dr. Gairdner by Dr. Littlejohn, who had detected in it, on microscopic examination, beautiful rhomboidal and feathery acicular crystals of a deep red colour. These were exhibited to the society; they were the same in character as those found in apoplectic cysts; and although in this case the evidence of post-mortem examination was wanting, Dr. Gairdner was inclined to believe it to have been an instance of hæmorrhagic condensation, going through the same course as in the preceding case.

Melanotic Tumours in the Horse. Dr. W. T. Gairdner showed a specimen of melanotic tumour in the horse, which he had received from Mr. Barlow. It was of a bistre colour, yielded an inky fluid, and was of the consistence of a fibrous or sarcomatous tumour. This species of tumour occurred, as observed by Carswell, chiefly among grey and white horses, and was not uncommon in the skin and subcutaneous tissues, especially about the anus. The pigmentary matter was in the form of dark-coloured angular granules, almost the size of blood-corpuscles, of a somewhat crystalline appearance, and mostly of a deep brown or black colour, more or less mingled with a deep purplish tinge. These granules were both free, and enclosed in cells of the diameter of 1-80th to 1-100th of a line; they were no doubt varieties of the crystalline forms derived from the colouring matter of the blood, which is known from chemical analysis also to be the source of the melanotic colour. The tumour seemed almost entirely composed of this pigmentary matter and of fibrous tissue.

MISCELLANEOUS INTELLIGENCE.

Presentation of a Testimonial to John Forbes, Esq., M.D., F.R.S. The committee appointed at the general meeting, by the subscribers to the Forbes Testimonial, to expend the sum collected, in the purchase of a piece of plate, presented this testimonial to Dr. Forbes on the evening of the 3d of May. The committee invited the subscribers in London and its vicinity to meet them on the occasion, and nearly one hundred professional gentlemen obeyed the summons. The testimonial consists of a very handsome piece of plate, a candelabrum and epergne, beautifully designed and executed by Messrs. Smith, of Duke-street, Lincoln's-inn-fields. The stem is supported by three figures, representing Industry, Health, and Hope, corresponding to Dr. Forbes' motto, "labore, robore, spe." Mr. Stanley, president of the Royal College of Surgeons, presented the testimonial to Dr. Forbes.

Testimonial to Dr. Bignell, of Barnstaple. In acknowledgment of his services to the poor of the town and neighbourhood, as Physician and Principal Manager of the Barnstaple and North Devon Dispensary, since its formation in 1832, £50, collected from his friends, in subscriptions limited to 10s. 6d. each, has lately been spent in the purchase of a silver salver and other plate, which were publicly presented to the Doctor, in the past month of May.

John Hunter Club. A good deal of jealousy and suspicion have been excited by statements in the weekly journals, to the effect, that under this designation a private society has been formed for carrying out personal and petty policy in the College of Surgeons. We cannot contradict the rumour; neither can we vouch for its truth. The election of three Fellows into the Council takes place on the 5th July: and one of the objects of the Club, it is said, is to influence the choice.

St. Mary's Hospital, Paddington. Two or three weeks ago a public dinner was held at the London Tavern. In the absence of His Royal Highness the Duke of Cambridge, Earl Manvers filled the chair. Nearly two hundred gentlemen sat down to dinner. The total amount of contributions announced during the evening, amounted to £2,600 of donations, and a legacy of £300 from the late Mr. King, of Marylebone-street.

Macclesfield Medico-Ethical Society. It embraces all the legally qualified practitioners: its principles and objects being similar to those of the Manchester Medico-Ethical Society, the rules of which, with some slight modifications, it has adopted.

University College Hospital. Her Majesty has given £100 from the privy purse in aid of this institution.—*Times*, June 16.

Bequests of the late Richard Carmichael, Esq. Mr. Carmichael has bequeathed £4500 to be added to the Medical Benevolent Fund, in addition to £500 given during his life-time; £5000 in all. To the College of Surgeons of Ireland, he has left £3000, the interest to be applied to the foundation of prizes for essays on specified subjects. To the Richmond Medical School he has also left £2000, the interest to be distributed annually in prizes amongst the students who distinguish themselves; and also £8000 to be applied in the purchase of ground and erection of buildings.—*Dublin Medical Press.*

University of Glasgow. Important Action. We understand that an action has just been raised before the Lords of Council and Session, at the instance of the Very Rev. Duncan Macfarlan, D.D., Principal, and other Members of the Faculty of the University of Glasgow, against John Sligo, Esq., of Carmyle, and other Directors of the Glasgow, Airdrie, and Monklands Railway Company, calling upon the latter to consign £90,000, also to pay £4840 as the price of land, £10,000 for an hospital, £5000 of expenses, and £20,000 of damages, etc., etc. On this action inhibitions and arrestments have been used against the defendants. The action arises from the sale of the University Buildings under the Act of Parliament which this Railway lately obtained. It is likely to give some occupation to the gentlemen of the long robe in Edinburgh.

Glasgow Botanic Garden. At its meeting on Thursday last, the Town Council of Glasgow, by a majority of twenty-five to five, rejected a proposal made by one of the members, that the Council should use its influence with the Directors of the Royal Botanic Gardens to have them kept open on Sunday, or, as the memorialists termed it, "the first day of the week," and on the other days at a charge not exceeding one penny for each visitor. The Council, however, adopted a motion to memorialize the Directors to grant *free* admission to the working classes, on two days each month of the season.

New Medical Journal in Prussia. The medical staff of the Charité Hospital, at Berlin, are going to publish a journal, which is to appear three times a week, under the title of *Annalen der Berliner Charité Krankenhauses*, Reports of the Charité Hospital at Berlin.

The Great Hospital of Berlin. The Charité Hospital of Berlin is the largest establishment of the kind in the Prussian capital. There are wards for medical cases, for surgery, for the insane, and for midwifery. The number of beds is altogether 1230, and from 10,000 to 11,000 patients are admitted annually. The mean mortality is 10 per cent. The annual expenditure is about 22,500, arising both from the property of the hospital, and from a yearly contribution from Government of £1250. A great many of the patients are, however, supported by their families, servants by their masters, and prisoners by the State. It is likewise customary for people, in tolerable circumstances, to be admitted on the payment of a certain weekly sum.

Quackery in Paris. The following information we derive from an anonymous writer in the *Medical Times* of June 9. A great moral improvement is indicated in Paris by the fact, that the presence of Cholera has not given rise to any of those quack productions, or scarcely any, which usually follow in its wake. One or two puffing pamphlets, and an anti-choleraic vinegar, are the only indications which have been noted. On the other hand, ever since the Revolution of February 1848, we have been persecuted by daily advertisements from certain *virile* professors near Bedford and Soho-squares. They imagined, we presume, that we had been emasculated by the expulsion of Monarchy; but the "chaff" does not seem to produce an abundant harvest. Dr. Graham and his "Celestial Bed" have reappeared in the person and practice of a professor, said to be an ex-Prefect of his ex-Majesty, Louis Philippe. He has opened two splendid establishments at Puylevêque-sur-lot, where "he undertakes to procure a happy fertility for the majority of females reputed sterile. No payment required in cases of failure"!!

News from the United States. The following scraps from the *Boston Medical and Surgical Journal* are curious: "Dr. Hatch has been arrested at Philadelphia for counterfeiting. Eye and ear infirmaries appear to be on the increase. Cod-liver oil is constantly gaining favour in the treatment of consumption. A new and curiously constructed tooth brush has been sent out from England, which may be had at Almy's, corner of Howard-street, which is highly recommended by Dr. Hitchcock: the bristles are so arranged that the teeth can be brushed on the inner side, and thus dislodge all offending particles. Dr. Lowrie, formerly of New Jersey, is at Panama, doing a large business: physicians are pocketing the gold as it comes from the diggings. An absurd story is circulating in the papers, that Dr. Warren, of Boston, opened the stomach of a young woman last week, while under the influence of ether, and extracted a tape worm! On the authority of Dr. Warren himself, we can pronounce it wholly untrue." The above paragraphs are taken from the body of the Journal: the following are two consecutive advertisements from the cover:—"To Physicians. The Subscriber offers for sale his situation in Temple, N.H. The premises consist of a large House, Barn, and outbuildings, very commodiously arranged, and four acres of excellent land. As a location for one of the profession, the privilege is unquestionable. Notice.—A rare location for a physician is offered in a pleasant and beautiful village in York County, Maine, within about two hours' ride from Portland. The present incumbent wishing to change his business, will dispose of his stand (?), surgical instruments, medicines, books, etc., on very reasonable terms, to any competent practitioner. For further particulars, inquire at this office; if by letter, post paid."

Quackery in Brussels. The Belgian Courts have lately condemned to one year's imprisonment, and a fine of twenty francs, Francis Van Rymenant, of Antwerp, for illegally prescribing and compounding medicines. Quackery is very rife in expedients. In a Brussels paper we find the following, among a host of advertisements, for lost watches, pins, etc. etc.: "On Saturday last there was stolen a name plate, from the door of M. Lippschutz, dentist, from London, residing at No. —, ——— street. Whoever will return it shall receive five francs reward."

Medicine in Turkey. A Medical Journal has been started in the Ottoman Empire,—an important sign of the times and of the advancement of Medical Science. It is called, *La Gazette Médicale de Constantinople*, and is published in the French and Turkish languages. The editor is Haïr-Ullah-Effendi, who signs himself, "*Docteur en Médecine et Directeur des Etudes de l'Ecole Imperiale de Galata-Serai.*"

Diseases of California. The diseases most common in California are fever, leprosy, and dysentery. The yellow fever is unknown; but intermittents are very common, the natural result of the ground being under water during four months of the year, the quantity of rain that falls, the great heat of the climate, and the intense fogs. Emetics and large doses of quinine are the usual modes of treatment. Leprosy is a very common disease in all the warm regions of America. Dysentery is the most fatal disease of the country, and caused, it is said, by the general use of fruits. Generally speaking, the climate is good; and, with temperate habits and prudence, any serious malady may be avoided.

Use of Hydrophytes. A French naval surgeon, Dr. Gonleven, observing the avidity with which cows eat certain sea-weeds, as *Laminaria leptopoda*, *digitata* and *palmata*, contrived to make from them a good and nutritient soup—a very acceptable addition to the table of the poor cottager in the absence of potatoes. In Scotland, these species of Algæ are commonly eaten, and "Dulse and Tangle" is among the street-cries of Edinburgh. In the Himalayas, a species of *Laminaria* is called *goitre-leaf*, because chewed by the inhabitants where goitre prevails.—*Medical Times.*

APPOINTMENTS.

Birkett, John, Esq., appointed, on the 23rd May, Assistant-Surgeon to Guy's Hospital.

Brown, Alexander R., M.D. (for eight years Physician to the Stamford Infirmary), elected, by a majority of votes, to be Physician to the Sussex County Hospital, in the room of Dr Hall, resigned.

Lang, Henry, M.B. Lond., elected, on the 31st May, Physician to the Westminster General Dispensary (Gerard-street, Soho), vacant by the resignation of Dr. Child.

Macintosh, Dr., of Dundee, was elected Physician and Superintendent of the Royal Lunatic Asylum, Glasgow, on the 25th May, in the room of Dr. Hutcheson, retired. The votes stood thus—for Dr. Macintosh, 12: for Dr. David Skae, of the Royal Edinburgh Lunatic Asylum, 8.

Manley, Dr., appointed Honorary Surgeon to the Northern Dispensary, Liverpool.

Puleston, J. H., Esq., elected House Surgeon to the Kent Ophthalmic Hospital.

Walshe, W. H., M.D., elected Professor of Medicine to University College, in the room of Dr. C. J. B. Williams, resigned.

OBITUARY.

Aitchison, Thomas, Esq., Surgeon, at Dunbar, on 25th May.

Beilby, William, M.D., F.R C.P.E., at his residence, 57, Northumberland-street, Edinburgh, on 30th May, of disease of the kidney. Dr. Beilby was held in very high estimation as a Christian gentleman and physician. He recently occupied the Chair of the Edinburgh College of Physicians.

Bellot, Joseph, Esq., Consulting Surgeon to the Stockport Infirmary, aged 82, on the 22nd February, at the Parsonage, Poynton, Cheshire. Mr. Bellot commenced his active professional life in 1787, when he was House-Surgeon to the Westminster Hospital. On the 5th February, 1789, he passed as Assistant-Surgeon R.N.; and on the 3rd June, 1790, as Surgeon R.N. On retiring from the service, in 1795, he settled at Stockport.

Bourgery, M., at Paris, of cholera, on 8th June. He was well known for his researches in anatomy, and was the author of a large work, entitled *Anatomie de l'homme*.

Brandreth, Thomas, Esq., Surgeon, at Liverpool, on 5th June, aged 34.

Carmichael, Richard, Esq., about three weeks ago, by accidental drowning. This distinguished surgeon was proceeding on horseback to his country residence, at Sutton, near Howth, and on arriving at a part of the strand, where an inlet of the sea flowed over the sandy beach, he asked if it would be safe to cross there: being answered in the affirmative, he ventured to cross, but when more than half way, the horse got out of his depth, and after swimming for a little, leaned over, and fell on his side, when the rider lost his seat, and became submerged in the tide.

Clift, William, Esq., F.R.S., Conservator of the Hunterian Museum of the Royal College of Surgeons of England for nearly half a century, aged 77, on the 20th June, at his residence, Stanhope Cottage, Hampstead-road. Mr. Clift was a man of very high scientific eminence, and much esteemed in private life for his straightforwardness and integrity of character. The deceased has left an only daughter (the wife of Professor Owen) and a large body of friends to deplore his loss.

Mackinnon, Donald, M.D., at Norland-square, Notting Hill, on 10th June.

Munro, James, Esq., Surgeon, at Bridge of Weir, N.B., of typhus fever, on 29th May.

Nightingall, B., Esq., formerly Resident Surgeon of the Liverpool Fever Hospital and Workhouse, aged 61, on the 22nd April, at Delph Cottage, Cheshire.

Pickance, John, Esq., Surgeon, aged 48, on 3d June, at Penshurst, Kent.

Rolland, John, Esq., Surgeon, fourth surviving son of the late Adam Rolland, Esq., of Gask, at 14, Shandwick Place, Edinburgh, on the 26th June.

BOOKS RECEIVED.

Chadwick on Alcoholic Liquors in Health and Disease. pp. 123. London: 1849. Collins' Life and Writings of the late Joseph Clarke, M.D. of Dublin. pp. 88. Dublin: 1849. Daleymple's Pathology of the Human Eye. *Plates.* Fasc. II. London: 1849. Dendy's Portraits of Diseases of the Scalp. *Plates.* No I. 4to. London: 1849. Lee (Robert, M.D., F.R.S.), on Ganglia and Nerves of Uterus. 4to. pp. 36, *with five plates.* London: 1849. Also by same Author, Practical Observations on the Diseases of the Uterus. 4to. *with plates*, Parts I and II. London: 1849. Also by same Author, Clinical Midwifery. 12mo. 2nd Ed. *Plates.* London: 1849. Montgomery (Dr. W. T.), on Anæsthetic Agents in Midwifery. Dublin: 1849. Reports of Westminster Medical Society. No. II. London: 1849. Simpson's (William) Digest of Reports on Sanitary Reforms. London: 1849. Warburg's Fever Tincture—Official Documents relative to. London: 1849.